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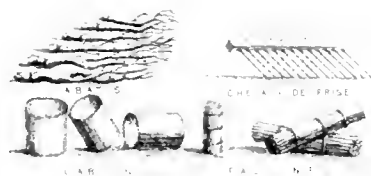
# MILITARY SIGNS AND ILLUSTRATIONS OF MODERN FORTIFICATION.

## SIGNS USED IN THE WORK

— Cavalry	— Artillery	• Fortified 1 <sup>st</sup> Order
— Infantry	— Artillery	• 1 <sup>st</sup> Order
— Artillery	— Artillery	• 1 <sup>st</sup> Order
— Artillery	— Artillery	• 1 <sup>st</sup> Order
— Artillery	— Artillery	• 1 <sup>st</sup> Order
— Artillery	— Artillery	• 1 <sup>st</sup> Order
— Artillery	— Artillery	• 1 <sup>st</sup> Order
— Artillery	— Artillery	• 1 <sup>st</sup> Order
— Artillery	— Artillery	• 1 <sup>st</sup> Order
— Artillery	— Artillery	• 1 <sup>st</sup> Order

## GENERAL MILITARY SIGNS

• Fort	• Redoubt	• Open Town 5 <sup>th</sup> Order	• Alms	Impassable for Cavalry
• Citadel	• Soudier	• Towns & Villages	• Chey-mx de Frise	• Impassable for Infantry
• Fortified Castle	• Closed Castle	• Cannon Mortar Batteries	• Military Pits	• Guns in Position
• Open Town 1 <sup>st</sup> Order	• Open Town 2 <sup>nd</sup> Order	• Tote du Bout	• Palisades	• Guns on March
			• Caltrops or Crows Feet	• Baggage Waggon
			• Passable for Troops	• Field of Bath



FIELD PIECE &amp; LEMBER SECTIONS



AMMUNITION WAGON &amp; LEMBER



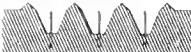
MORTAR &amp; SHELLS



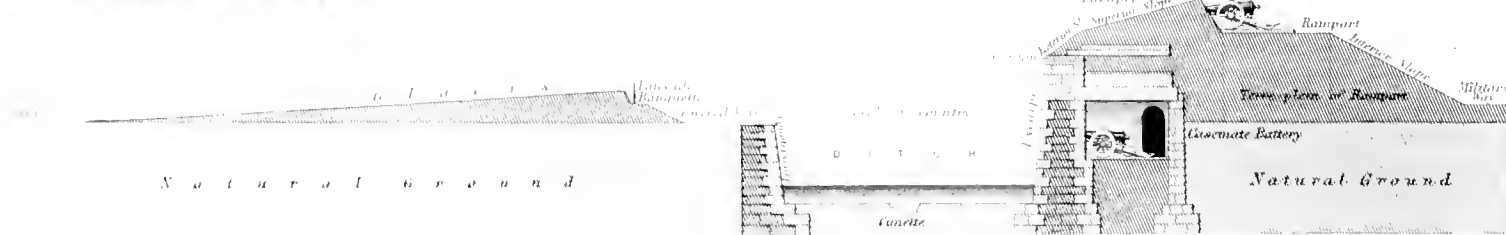
SAND BAGS



PALISADE



TROUS DE LOUP

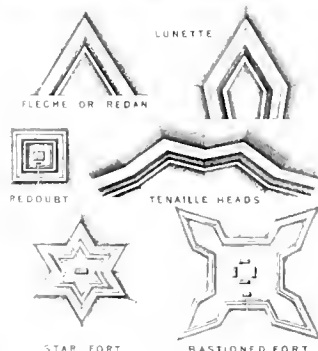
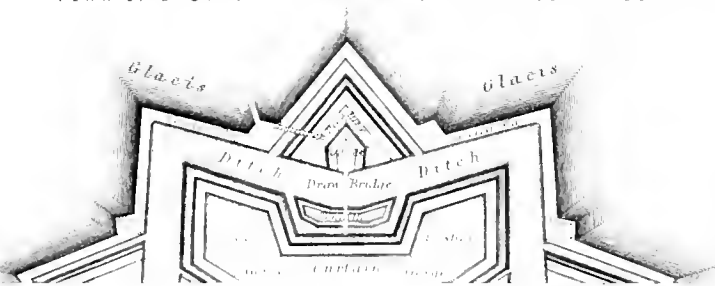


SECTION OF GLACIS DITCH, RAMPART, &amp;c



PLAN OF BASTIONED

FORT WITH LUNETTES



STAR FORT

BASTIONED FORT



# ATLAS

TO

## ALISON'S HISTORY OF EUROPE.

CONSTRUCTED AND ARRANGED, UNDER THE DIRECTION OF

MR ALISON,

BY

ALEXANDER KEITH JOHNSTON, F.R.G.S.

AUTHOR OF THE NATIONAL, AND EDITOR OF THE PHYSICAL ATLAS

WITH A

CONCISE VOCABULARY OF MILITARY AND MARINE TERMS

WILLIAM BLACKWOOD AND SONS, EDINBURGH AND LONDON.

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# CONCISE VOCABULARY

## OF

### MILITARY AND MARINE TERMS.

**ABBATIS.** A species of intrenchment made by trees cut down and laid in a ditch or other excavation, at a short distance from the parapets of field-works, with their branches pointing outwards, to prevent or retard the advance of an enemy.

**ACCOUTREMENTS.** This term denotes the belts, pouches, &c., of a soldier.

**ADJUTANT.** The Adjutant is the assistant of the commanding and field officers in the execution of their duty.

**ADJUTANT-GENERAL OF THE FORCES.** An officer of high rank and trust at the Horse Guards in London.

**ADJUTANT-GENERAL.** An officer of distinction, selected to assist the general of an army in his various duties.

**ADVANCED GUARD.** A detachment of troops preceding the march of the main body.

**AIDE-DE-CAMP.** An officer attached to a general, to carry orders, &c.

**ALARM-POST.** The place appointed for every detachment or regiment to assemble in case of a sudden alarm.

**APPROACHES.** The first, second, and third parallels, with their corresponding trenches, saps, and mines, by means of which the besiegers approach in comparative safety a fortified place.

**APPUI, POINT D'.** A term applied to any given point upon which a body of troops is formed.

**ARMISTICE.** A truce or temporary suspension of hostilities.

**ARMOURER.** A person who makes, repairs, and cleans arms.

**ARMOURY.** A storehouse in which arms are kept.

**ARMS, A STAND OF.** A complete set for one soldier.

**ARSENAL.** A magazine for military stores.

**BALLS.** Spherical bodies made of cast-iron or lead.

*Cast-iron balls* are generally used by artillery, and lead balls for musketry.

*Light balls* are used at sieges, in order to discover working parties from the light given by them.

**BANQUETTE.** A small mound of earth, three or four feet wide, elevated to within four or five feet of the crest of the parapet, to enable the shortest men to fire over it with facility.

**BARBET BATTERIES.** Batteries without embrasures, in which the guns are raised to fire over the parapet, generally formed at the salient angles of the different works, to enable the guns mounted on them to range freely over the adjacent country.

**BARRACKS.** Buildings for the lodgment of troops, including necessary accommodation for cooking, guard-rooms, mess-rooms, magazines, &c.

**BARRICADE.** An obstruction formed in streets, avenues, &c., so as to block up access to an enemy. They are generally formed of overturned waggons, carriages, large stones, breastworks, abbatiss, &c.

**BASTION.** In fortification, generally constructed at the salient

angle of the polygon, forming the magistral or principal line of defence surrounding a place. It consists of two faces, right and left, and two corresponding flanks, and is so formed as to be well seen, and defended every where by the flanking fire of some other part of the works.—*Bastions* are distinguished into empty and full. The interior surface of the empty bastion is on a level with the *terreplein* or ground of the place. The interior of the full is raised by earth to the level of the rampart.

**BASTIONED FORT.** Generally a field-work constructed on a polygon, upon the principles of permanent fortification, of which the lines of defence do not exceed the range of musketry.

**BATON.** A short staff or truncheon borne by field-marshal as a symbol of their authority.

**BATTALION.** A body of infantry, generally composed of ten companies, each consisting of a lieutenant, an ensign, three or four sergeants, and about 100 rank and file, under the charge of a captain: the whole, with the staff-officers attached to it, such as adjutant, paymaster, quartermaster, surgeon, and assistants, being under the command of a lieutenant-colonel.

**BATTERY.** The name given to any place where cannon, mortars, &c., are mounted for the purpose of defending or attacking important points. Also, in the field, a division of a regiment or brigade of artillery, as a company is a division of a regiment of infantry.

**BEAR UP OR AWAY.** The act of changing a ship's course, so as to cause her to sail more before the wind than she did previously.

**BEATING TO WINDWARD.** Making a progress against the direction of the wind, by steering alternately close-hauled on the starboard and larboard tacks.

**BERM.** A narrow level space, two or three feet wide, along the exterior slope of a parapet, to prevent the mass of earth and other materials, of which it is composed, from falling into the ditch.

**BIVOUAC.** An army bivouacs at night when it does not encamp or take up quarters.

**BLOCKADE.** A place is said to be blockaded by land or sea when all ingress and egress is prevented by troops or ships of war surrounding it.

**BLOCKHOUSE.** Originally a work built nearly or wholly of the trunks of trees. Now applied generally to small forts, capable of protecting against musketry, but not against artillery.

**BODY OF A PLACE.** The space enclosed by a line of fortifications, formed by bastions, curtains, ravelins, &c., called the *cucceinte*.

**BOMBARD.** To throw bombs or shells into a place, with a view to its destruction, and to compel surrender.

**BOOM.** A strong beam of timber, &c., placed across a river or harbour to prevent the entrance of an enemy.

**BREACH.** An opening effected by artillery or mine in the walls and defences of a fortified place.

**BREAK GROUND.** To commence the siege of a place by opening trenches, &c.

**BREASTWORK.** A parapet thrown up to the height of the breasts of the troops of a place, to protect them when defending it.

**BRIDGE.** Besides the usual stone, chain, and wooden bridges, there are several descriptions of military bridges, formed of boats connected together, pontoon bridges, and bridges of casks, according to emergencies. These are joined together by planks, &c., so as to give a safe passage for troops, guns, and stores.

**BRIGADE.** A division of troops composed of several corps, consisting of detachments of infantry and cavalry, under the command of a general officer. The strength of a brigade is various. There are cavalry brigades and infantry brigades: the former containing usually from six to nine squadrons, the latter from three to six battalions. There are also brigades of artillery. The term is also frequently applied, in military works, to a large troop of mules with their drivers, in the service of the commissariat or of store-keepers.

**TO BRING TO.** To check the course of a ship when she is advancing, by arranging the sails in such a manner that they shall counteract one another, and prevent her from either advancing or retreating.

**BROADSIDE.** A discharge of all the guns on one side of a ship, on both her upper and under decks.

**BULKHEAD.** A partition separating one part of a ship from another on the same deck.

**CARTRIDGE.** A term used for various purposes. Sometimes it signifies a box or chest for holding ammunition for cannon, and at other times for musketry, having different divisions for particular kinds. It is also used for designating provision waggon, &c.

**CALIBRE OR CALIBER.** The diameter or capacity of bore of a cannon or other firearm.

**CAMP.** The ground covered by an army under canvass.



**CANTEEN.** A small circular tin or wooden vessel, used by soldiers to carry liquor when they are on active service.—A trunk or chest containing culinary and other utensils for the use of officers.—A sutling-house kept in garrisons for the use of the troops.

**CANTONMENTS.** When troops are detached and quartered in different adjacent towns and villages, they are said to be placed in cantonments.

**CAPITAL.** A line drawn from the angle of the polygon, forming the salient angle of the bastion to the middle of its gorge, &c.

**CAPITULATION.** The surrender of a fortress or army on stipulated conditions.

**CAPONIERE.** A protected passage from the body of the place to an outwork. It frequently forms a secure passage or covered way, made by a small glacis on each side from the middle of the curtain to the gorge of the ravelin. It also serves as a defence to the main ditch by a raking fire of musketry.

**CARBINE.** A short small musket, used principally by cavalry.

**CARRIAGE of a gun.** The machine upon which it is mounted.

**CARRY.** To obtain possession of any place by force, whether out-works, field-works, a battery, a parapet, or a town itself.

**CARTRIDGE.** A case of paper, flannel, or parchment, fitted to the bore of a piece, and containing an exact charge of gunpowder. These are blank-cartridges. The addition of the bullet in the same envelope constitutes the ball-cartridge.

**CASE or CANISTER SHOT.** Discharged from heavy ordnance, and consists of a number of musket bullets or iron balls enclosed in a tin or iron case.

**CAVALIER.** A work formed within a full bastion, and elevated ten or twelve feet above it, to command a particular point, and give additional strength to works.

**CHAMBER.** The place where the powder is deposited in a mine. The cavity, in a gun or mortar, which receives the charge.

**CHARGE.** In gunnery, comprehends the amount of powder and shot with which a gun is loaded.

**CHEVAUX-DE-FRISE.** An object employed in fortification for the defence of places. It consists of a prismatic beam of timber of a square or hexagonal form, of about six or eight feet long, and five or six inches in diameter, through which pointed stakes are driven perpendicular to each of its faces, equidistant from each other, and radiating from the centre of the beam.

**CHEVRONS.** The bars or distinguishing marks on the coat-sleeves of non-commissioned officers.

**CITADEL.** A fortress, generally in the form of a pentagon or hexagon, situated on the most commanding ground in or near a city, though generally separated by an esplanade of sloping ground without buildings, so that no approach can be made unperceived.

**CLOSE-HAULED.** That trim of a ship's sails which enables her to make a progress in the nearest possible direction towards that point whence the wind blows.

**COLONEL.** The first officer in command of a regiment of infantry, cavalry, or artillery.

**COLOURS of a regiment.** Two silk flags carried by the seniorsigns.

**COLUMN,** in a military sense, is used in contradistinction to **LINE.**

Thus a regiment of cavalry is in line when its whole front is displayed. It may advance in column of squadrons, of troops, (which are half-squadrons,) of divisions, (which are half-troops,) or of threes, (according to the modern English formation.) Troops moving along a road are necessarily in column. Hence a body of troops on the march are often spoken of as "a column." "Close column" is when the squadrons, companies, or battalions, &c. &c. are formed close in rear of each other. "Open column" is when sufficient interval is left for them to wheel into line if required.

**COMMAND.** In the regular forces belongs to the senior officer.—Command, in fortification, is the elevation of each interior work above the exterior, so as to see and fire over the whole, or over the level country.

**COMMUNICATION, LINES OF.** Trenches made to insure a safe intercourse between any two points or forts.

**CONTRIBUTION.** A tax paid to a hostile force, by the inhabitants of a town or country, to avoid being plundered.

**CONVOY.** A guard of troops employed to escort provisions, stores, ammunition, or money, conveyed in time of war from one point or place to another. It is also a ship of war employed to protect a fleet of merchant ships during the whole or part of their voyage.

**CORDON.** A round projection of stone placed on the top of the revetement of the escarp, to throw the rain off the masonry, and prevent the besiegers ascending by their ladders for an escalade. A square projection, called a *tablette*, has lately been preferred.

**CORPORAL.** Lowest grade of non-commissioned officers.

**CORNET.** Lowest rank of commissioned officers in cavalry regiments.

**CORPS.** This word, which has crept into our language from the French, means literally a body, but is variously applied. In common English parlance, it usually designates a regiment. In Napoleon's wars it was applied to large divisions of troops; to large armies, in fact, detached from still larger ones. In the Russian campaign some of the so-called "corps" numbered forty or fifty thousand men. By modern historians the word is generally used in the more extended sense.

**COVER.** In military operations, implies generally security or protection.

**COVERED WAY.** A space of about 30 feet broad, extending from the counterscarp of the ditch to the crest of the glacis, passing completely round the whole body and outworks of a place.

**COUNTER-GUARD.** A revêted work, consisting of a comparatively narrow rampart and parapet, commonly parallel to the faces of a bastion or ravelin, so as to strengthen any particular point liable to attack.

**COUNTERSCARP.** The outer boundary of the ditch, which is generally faced or revêted with masonry, to render the descent into the ditch difficult.

**COUNTERSIGN.** A watchword, demanded by sentries of those who approach their post.

**COUR-BEL-VAIN.** A sudden and vigorous attack, for the purpose of instantaneously capturing a place or gaining a position.

**CROWN-WORK.** A figure resembling a crown, and consisting of two small fronts of fortification connected with the body of the place by two long sides, so as to occupy a position it is desirable to secure.

**CUT-ASS.** A piece of metallic defensive armour, covering the more exposed and vital parts of the body, from the neck to the waist.

**CUNETTE OR CUVETTE.** A trench generally 7 or 8 feet deep, and 10 or 12 wide, serving to prevent the passage of troops through a dry ditch; whilst, at the same time, it carries off the superfluous water from the place.

**CURRAIN.** In fortification, is that portion of the rampart which connects two adjacent bastions.

**DEBOUCH.** To march out of a wood or defile into open ground.

**DEFILE.** A narrow passage, through which, in marching, troops can present a narrow front only, and therefore dangerous in presence of an enemy.

**DEMILINE.** Called also a *ravelin*, is a work constructed to cover the curtain and flanks of the bastion.

**DISCANT.** The landing of troops from transports, for the purpose of invading a country.

**DISLODGE.** To drive an enemy from any position or assigned station.

**DITCH.** In fortification, is an excavation made round the works, from which the earth required for the construction of the rampart and parapet is obtained.

**DIVISION.** A portion of an army, including infantry, cavalry, and artillery, and commanded by a general officer.

**DORLING.** The act of sailing round or passing a cape or other point of land.

**DOUBLING LION.** In naval tactics, is the act of enclosing any part of a hostile fleet, and placing it between two fires.

**ÉCHELON.** This word is adopted from the French, its primary meaning in that language being a step of a ladder. This formation, in the movements of an army in the field, resembles the steps of a ladder, and therefore gave rise to the name. It is very convenient for the attack and retreat of large bodies, for oblique and direct changes of position.—*Oblique changes* are produced by the wheel of divisions through less than a quarter of a circle.—*Direct changes* are produced by a perpendicular and successive march of divisions from line to front or rear.

**EMBRASURE.** An opening through the parapet, through which to point a gun.

**ESCEINTE.** The rampart enclosing the whole body of a place, consisting of bastions, curtains, and the main ditch.

**ENFILADE.** To sweep the whole length of any line of works or troops by the fire of a battery formed on a prolongation of the line.

**ENSIGN.** The lowest rank of infantry commissioned officers, subordinate to lieutenant. Ensigns carry the regimental colours.

**ÉPAULLEMENT.** An elevation of earth, resembling a shoulder, thrown up perpendicularly to the face of a battery, to cover the troops behind it from an enfilade fire of an enemy. It is frequently composed of fascines or gabions filled with earth.

**EQUIPAGE, CAMP.** Consists of tents, kitchen and cooking utensils, saddle-horses, baggage-waggons, &c.

**ESCALADE.** To attack a fortress by scaling or passing over the walls by means of ladders.

**ESCARP.** The side of the ditch next the rampart, which, in permanent fortification, is faced with stones or bricks, called the revêtement.

**ESPLANADE.** A part of a fortified place set apart for exercise and public walk.

**EVACUATE.** To withdraw from a town or fort in consequence of treaty, capitulation, or orders.

**EVOLUTION.** A movement by which troops change their position for attack or defence.

**FALSE ATTACK, OR FEINT.** A pretended attack, made to deceive and divert an enemy from the real point to be assailed.

**FASCINES.** A species of long cylindrical faggots, made of brush-wood or branches of trees, for the purpose of revêting the cheeks of embrasures, or supporting the earth of extensive epaulements in field-batteries.

**FAUSSE BRAYE.** A work formerly used in fortification, but now seldom employed, as its disadvantages counterbalance its advantages. It is a platform rising to half the height of the revêtement, thus giving a good grazing fire against the besiegers before they enter the ditch, but it then affords a ready means of scaling the walls.

**FIELD-MARSHAL** is the highest military rank in the British service.

**FIELD OFFICERS.** Colonels, lieutenant-colonels, and majors.

**FILE.** A line of soldiers drawn up behind one another. The general term means two soldiers, consisting of the front and rear rank men.

**FIRELOCK.** A general name for the infantry musket.

**FLANK.** The extreme right or left of a body of troops, or of an encampment.

**FLANK COMPANIES.** The right and left companies of infantry regiments, generally grenadiers and light infantry.

**FLECHE** or arrow. A simple species of field-work, consisting of two faces forming a salient angle, and easily constructed for the defence of a position.

**FLEET.** Any number of vessels above five sail of the line.

**FORAGE.** Provender for the horses of an army.

**FORD.** A shallow part of a river, where troops may pass without bridge or boat.

**FORE AND AFT** signifies throughout the whole ship's length.—To rake a ship fore and aft is to fire along her decks, thus causing the greatest possible damage and loss of life.

**FORLORN HOPE.** A party of officers and men who are detached to lead the attack when an army storms a fortress. From the great danger attending this operation its name is derived.

**FORTS** are works constructed to secure places of importance, to

afford support to the wings or particular parts of an army, or to command the resources of a district of country.

**FORTIFICATION.** The art of enclosing towns or other positions with works, so as to render them more easily defensible by their garrison. It may be divided into different classes, as permanent, field, defensive, offensive, natural, and artificial.

**FOSSE.** The French name for a ditch.

**FRAISES.** Palisades or stakes ranged in an inclined position, directed towards the breasts of an enemy, and forming defences.

**FUSE.** A tube fixed into a shell filled with combustibles, and furnished with a quick match. It is made of a length proportional to the distance intended to be thrown from a mortar, so as to burn during its flight, and to explode the shell at the moment it strikes the ground.

**FUSIL.** A small species of musket.

**FUSILIERS.** A body of troops originally armed with fusils, which gave the name. There are now only four regiments so called in the British service, and which are no longer so armed.

**GABIONS.** Cylindrical baskets of wicker-work, without bottoms, and filled with earth. They form a convenient and useful revêtement in field-works, especially during a siege, in the construction of batteries and the formation of saps.

**GALLERY.** A passage communicating to that part of a mine in which powder is placed.

**GARRISON.** The guard of a fortified place: the place itself: generally, the troops quartered in a town.

**GENERAL OFFICERS.** All those above the rank of colonel.

**GENERALISSIMO.** The commander-in-chief of a country's armies.

**GENOULLIERE.** That part of the parapet in the embrasure above the platform and under the gun.

**GLACIS.** The superior slope of the parapet of the covered way, extended in a gentle slope of about 4 in 20 or 30 to the level of the surrounding country. Its length is about 150 to 200 feet.

**GORGE.** The entrance from behind into a bastion, ravelin, or redoubt.

**GRENADE.** A small shell, whose fuse is set fire to, and which is then thrown by hand among the enemy, to a distance of twenty or thirty yards, causing considerable damage by its explosion. It is now chiefly used against besiegers approaching the breach.

**GRENADIERS.** The tallest and stoutest soldiers in a regiment

of infantry, selected and formed into a company, posted on the right of the battalion, and leading it in attack.

**GUARD.** A certain portion of troops appointed to watch a position and prevent a surprise.

**GUNNER.** A soldier employed to manage and discharge great guns. An artilleryman. In the British artillery the private soldiers are divided into gunners and drivers.

**GUNSHOT.** Generally understood to be the point-blank range of a gun.

**HAVESACK.** A coarse linen bag, issued to every soldier on service, for the purpose of carrying provisions.

**HELMETS.** Pieces of defensive armour for the head, chiefly worn by heavy cavalry.

**HOLSTERS.** Leathern cases fixed in the front of a saddle to contain a horseman's pistols.

**HONOURS OF WAR.** This expression is generally used in speaking of troops capitulating and evacuating a fortress. The nature of such "honours" depends very much on circumstances. In some cases the retreating forces depart scotfree, with colours, cannon, and baggage—in others, they retire to a distance, pile their arms, and then surrender as prisoners of war.

**HORN WORK.** Composed of two half bastions and a curtain, with two long sides directed perpendicularly upon the faces of the bastions or ravelins, so as to be defended by them. This disposition, however, has latterly been improved, by augmenting the number of fronts, and shortening the branches.

**HOUSEHOLD TROOPS** consist of the regiments of Life Guards, Horse Guards, and Foot Guards.

**HOWITZER.** A piece of ordnance of the nature of a mortar, of various calibres and dimensions.

**INFANTRY.** The foot-soldiers of an army.

**INTRENCHMENT.** A general term, denoting a ditch or trench, with a parapet for the purposes of attack or defence.

**INVEST.** To take the initiatory measures to besiege a town, by securing every road and avenue leading to it, and by seizing the commanding positions. The business of an investing force is to prevent the garrison from receiving assistance or supplies, and to retain its ground till the arrival of the army with its breaching artillery allows the commencement of the siege in due form.

**INUNDATION.** One of the most efficacious methods of impeding the approach of an enemy to any fortification or field-work.

It is effected by turning the course of a river or brook into a situation covering the work, by means of cuts, dams, and dikes.

**KNAPSACK.** A square frame covered with canvass, properly prepared for strapping on the infantry soldier's back, and containing the whole of his regimental necessaries.

**KNOT.** In navigation is a measure of about  $50$  feet, forming about  $\frac{1}{12}$  part of a nautical mile. The corresponding half-minute glass is  $\frac{1}{12}$  part of an hour. Hence the log-line being divided similarly to the hour, whatever number of knots run off the reel in half a minute, by the ship's motion through the water, the same number of nautical miles does she run in an hour. Knots and miles are therefore corresponding terms, and are used synonymously.

**LADDERS, SCALING.** A particular kind of ladders, having flat staves or steps, for the purpose of scaling—that is, mounting—the ramparts of an enemy.

**LARBOARD.** The left side of a ship when one looks towards the head.

**LARBOARD TACK.** The situation of a ship when sailing with the wind blowing on her larboard, or left side.

**LEE.** That part of the hemisphere to which the wind is directed.

**LEE-GAGE.** A ship or fleet to leeward of another is said to have the lee-gage.

**LIE UNDER ARMS.** To remain in a state ready for action.

**LIEUTENANT.** An officer in rank next under a captain.

**LIFE-GUARDS.** Picked regiments supposed to be particularly intended for the guard of the sovereign's person, and which take precedence of every other corps in the service.

**LIGHT INFANTRY.** Regiments or companies composed of active strong men, and are generally distinguished for their gallantry and efficient services in the field.

**LIMBER, in artillery.** The fore-part of a travelling gun-carriage, to which the horses are attached. When brought into action, the gun is unlimbered by unhooking the trail of the carriage, and the limber is taken away to a few yards in the rear.

**LINE.** Troops of the line are all those composing the British army, excepting the Life Guards, Horse Guards, Foot Guards, Royal Marines, Fencibles, Militia, Volunteer, and Yeomanry corps.

**LINES.** A species of field-works to cover an army or the frontiers of a state, or a district round a town, and may be either continued or broken with intervals. They have also different

shapes to produce a flanking fire for mutual defence and support, as is common in fortifications.

**LITTER.** A species of hurdle or palanquin-bed, in which those severely wounded are carried from the field of battle.

**LOG LINE and LOG.** Instruments by which the ship's velocity is measured.

**LOG BOARD.** That on which the daily transactions on board ship are recorded, whence they are copied into the log-book—the legal record of every nautical transaction.

**LOOP-HOLES.** Small openings, similar to embrasures in the walls of a citadel or fortification. Loop-holes are also made in the walls of gardens, or even houses, for the defence of important points during a battle, by a fire of musketry through them.

**LUNETTES.** Small works constructed to strengthen a ravelin or other part of a fortification. In this case, one face is about perpendicular to that of the ravelin, and the other, to that of the bastion, and so on in similar cases.

**MAGAZINE,** in general, is a place in which stores, arms, ammunition, and provisions, are kept. The name is frequently restricted to a place for preserving powder and shot.

**MAJOR.** An officer next in rank to the lieutenant-colonel of a regiment.

**MAJOR-OF-BRIGADE.** An officer, through whom orders are communicated to the troops, and considered as attached to the brigade, not to the officer commanding it.

**MARINES.** A body of troops especially for the naval service, trained to encounter an enemy either at sea or land.

**MASK.** A cover for a battery, so as to prevent it being seen and recognised by an enemy. When a body of troops encamps before a fortress, so as to prevent the garrison from moving out to harass an army acting freely in its vicinity, it is said to be masked by the hostile forces.

**MATCH.** A substance composed to retain fire for the service of artillery, mines, and fireworks. There are two kinds, quick and slow. Tow and sulphur are common ingredients.

**MERLON.** The space in the parapet between two embrasures, of about eighteen feet in length.

**MINE.** A subterraneous passage carried from the lines of the besiegers, under the rampart of a fortification, to blow it up by gunpowder.

**MORTARS.** Short cannon, of large bore, made of cast-iron or

brass. They are used to throw shells, which, by their explosion, set fire to buildings, overthrow works, dismount guns, and destroy troops.

**MUSKET-PROOF.** Any object capable of resisting the effects of musket-balls is said to be musket-proof.

**MUSTER.** A review of troops under arms, fully equipped, in order to take an account of their numbers, inspect their arms and accoutrements, and examine their condition.

**NATURAL FORTIFICATION, or STRENGTH.** A combination of natural obstructions, tending to impede the movements of an army.

**NON-COMMISSIONED OFFICERS.** The sergeant-major, quarter-master-sergeant, sergeants, corporals, and drum and fife majors, who are appointed by order of the commanding officer of the regiment.

**OPENING of the trenches.** The first act of breaking ground by a besieging army, for the purpose of carrying their approaches up to the place.

**ORDNANCE.** A name applied to every thing connected with the engineer and artillery service.—Cannon are frequently designated pieces of ordnance.

**OUTWORKS.** All the works constructed beyond the body of the place, such as ravelins, tenailles, covered ways, lunettes, &c.

**PACE.** In the infantry service, generally reckoned 30 inches, which the soldier is trained to take steadily. In *slow* time, 75 paces are taken in a minute; in *quick* time, 103; in wheeling, 120 paces, the outward file stepping 33 inches. In *double quick* time, 150 paces of 36 inches, or one yard, each in a minute.

**PALISADES.** Triangular prismatic beams of wood, about 6 inches on each side, sharpened at the top and inserted two or three feet into the ground at intervals of about 3 inches. They are placed in the covered way 3 feet from and parallel to the crest of the glacis, to secure it from surprise. Their tops are generally about a foot above the crest of the parapet behind which they are placed, and 3½ feet above the ground, round each traverse when there is no banquette.

**PARADE.** To assemble troops in a uniform manner, for the purpose of regular muster, exercise, and inspection. Parade signifies also the ground on which the exercises are performed.

**PARALLELS.** Deep and wide trenches, generally three in number, connecting the several lines of attack of a besieged place with each other. The first is about 600 yards from the covered way, the second 300, and the third near or on the crest of the glacis.

**PARAPET.** Generally a mass of earth raised on the exterior crest of the rampart next the enemy, 13 or 20 feet broad, and 7 or 8 feet high, to cover the troops behind it from the fire of the besiegers. Also, generally, banks thrown up to cover and assist the defence of a position.

**PARK OF ARTILLERY.** The whole train of artillery belonging to an army.

**PATROLE.** A small party of men under the charge of a subaltern or non-commissioned officer, detached from the guard, to keep moving along streets or roads, to maintain the order and regularity of troops, &c. Patroles are also sent out to gain intelligence of the position and force of an enemy. This duty requires great caution and activity.

**PERCUSSION CAPS.** Small caps of copper filled partially with an explosive composition, which is fired when struck smartly with considerable force between two portions of hard metal, as steel. These now almost entirely supersede the use of flints in exploding fire-arms.

**PETARD.** A large vessel or machine of gun metal secured to a strong square-board, having iron hooks attached to it, to fix it against gates or palisades. This kind of pot is filled with 3 or 10 pounds of gunpowder, which, being fired, destroys the objects before it, and procures an entrance for an enemy. Leather or strong canvass bags are also sometimes employed in cases of emergency, which are more expeditious, and equally successful.

**PIONEERS.** Soldiers trained to work with various tools or instruments, such as pickaxes, hatchets, saws, spades, &c. Each company of a regiment furnishes one man to complete this body, formed under the command of a corporal. Their services are very important in clearing forests, working in intrenchments, completing approaches, and forming mines.

**PIQUET.** A detachment, formed either of infantry or cavalry, sent out for the purpose of guarding an army from surprise, &c.

**PITCHING AND SCENING.** The movement of a ship, by which she plunges her head and stern alternately in the hollow of the sea.

**PIVOT.** The officer or soldier stationed at the flank on which a company wheels.

**PLACES OF ARMS.** Spaces at the salient and entrant angles of the covered way. The salient places of arms are the positions at which troops destined for a sortie generally assemble. The

entrant places of arms contain troops destined to flank the various branches of the covered way. In modern fortification the places of arms are frequently furnished with a redoubt, for the purpose of greater strength and security.

**PLATFORM.** A floor, generally constructed of timber, on which cannon are placed, behind an embrasure.

**POINT-BLANK.** The position of a gun or musket when the axis of the bore or barrel, and the objects aimed at, are in the same plane, either horizontal or inclined. The point-blank range, therefore, is the distance that a shot is projected, under these circumstances, till it strikes the ground.

**PONTON.** A species of boat for constructing bridges, to facilitate the passage of an *unfordable* river by an army. Those most approved were invented by General Pasley and Colonel Blandshard of the Royal Engineers. Those of the latter are frequently reckoned the more convenient, being cylinders of copper with traverses, and by that means little liable to sink in coarse weather. They are moored in the stream at regular distances, and connected with beams in such a manner that troops, artillery, and the stores of an army, can pass a river readily.

**PORT.** A name given, on some occasions, to the left or *larboard* side of a ship, especially in steering, to avoid the risk of mistaking larboard for starboard, which in difficult situations might be dangerous.

**POSTERN.** A passage constructed under the rampart, affording a communication from the fort into the ditch, &c.

**POUCH.** A case of strong leather, generally black, lined with tin divisions, for the purpose of carrying a soldier's ammunition. It is covered by a flap, to preserve the cartridges from wet.

**RAKE.** To cannonade a ship, at the head or stern, so that the shot may scour the whole deck.

**RAMPART.** A broad embankment of earth, generally faced with stone or brick, surrounding a fortified place, and forming the main-works, commonly called the *enceinte*.

**RANGE.** The distance from the piece fired to the point where the shot strikes the ground.

**RANK AND FILE.** All those soldiers who enter the ranks and carry muskets.

**RATION.** An allowance of provisions generally issued to troops.

**RAVELIN.** A detached work composed of two faces, forming salient angles, and raised before the counterscarp.

**REAR-GUARD.** A detachment of troops appointed to protect the rear of an army.

**RECONNOITRE.** To examine a country, so as to acquire a familiar knowledge of it, and to supply the defects of maps, required chiefly for military purposes. Particular parts of the map are distinguished by general marks of reference, connected with a minute memoir in writing.

**REDOUT.** A small work, frequently square, without bastions, placed at some distance from a fortification, to guard a pass, or obstruct the progress of an enemy in a given direction. A redoubt is sometimes made circular, because it will contain the greatest number of troops in a given space, and afford a superior defence. Redoubts have generally ditches and some means of giving a flanking fire, especially to those parts likely to be attacked.

**REDUCE.** To compel a garrison to surrender by means of attack.

**RE-ENTERING, or simply *entering angle*.** An angle in the fortification, pointing inwards to the place, and used in contradistinction to salient.

**REFUSE.** In military operations, to throw or keep back the troops, to avoid an engagement with an enemy advantageously placed.

**RENDEZVOUS.** A place appointed for the assembling of an army or of any body of troops.

**RESERVE.** A select body of troops, kept in the rear for some particular object, such as to support an attack, or final charge, to terminate a battle successfully.

**REVEILLÉ.** The beat of drums at the break of day. After this the sentries do not challenge.

**REVETEMENT.** An exterior wall, or facing of stone or brick, supporting the front of the rampart on the side of the ditch.

**RICOCHET.** A particular mode of firing guns at a low angle and loaded with a small charge. In this case the shot just clears the parapet of the enemy's works, and, rolling along the rampart, destroys the guns and kills numbers of men.

**RIFLEMEN.** Light infantry, armed with rifles instead of muskets, trained to be expert marksmen, and having a peculiar drill and exercise of their own.

**ROCKET.** A species of firework, frequently used for signals. Congreve rockets are most destructive missiles, frequently containing a shell, and very effectively employed in the attack of fortified places, in the destruction of shipping, and in various other warlike operations.

**ROLLING.** A ship's motion from side to side, at right angles to pitching.

**RUNNING FIRE.** When troops fire rapidly in succession, in opposition to a general discharge from the whole line.

**SACK.** To storm a town and pillage it.

**SALIENT ANGLE, in fortification.** An angle projecting into the country.

**SALLY.** A secret and offensive movement of a strong body of troops from a besieged place, in order to destroy the works of the besiegers.

**SALLY-FORTS.** Openings in the glacis, of 10 or 12 feet wide, which afford free egress and ingress to troops engaged in a sally or sortie.

**SAND BAGS.** Bags of earth employed to repair breaches and embrasures. The smaller kind are used on a parapet, three of which make a small opening, like a loop-hole, by placing two at a small distance, and covering it with the third.

**SENY OR SENTINEL.** A soldier placed in a position to watch the motions of an enemy, to prevent surprise, or to enforce such orders as he may be intrusted with.

**SERGEANT.** A non-commissioned officer, selected from the corporals, on account of his intelligence, steadiness, and general good conduct, and intrusted with several responsible duties.

**SERGEANT-MAJOR.** The highest non-commissioned officer in a regiment, and, from the nature of his duties, in a certain degree an assistant to the adjutant.

**COLOUR-SERGEANT.** A non-commissioned officer whose duty is to attend the colours in the field. This office is an honourable distinction, given only to men of valour and fidelity.

**SHAFT.** In mining, a perpendicular excavation, extending to some depth, from which the several branches of a mine diverge.

**SHRAPNEL-SHELLS, or Spherical Case-shot,** have a greater range than common case or canister, and are very effective in warfare.

**SIEGE.** The art of surrounding a town or fortification with a besieging army, and attacking it with artillery, assisted by mines and trenches, so as to destroy the principal defences, and ultimately to storm the place, unless it yields by previous capitulation.

**SKIRMISH.** A kind of irregular engagement between small parties, in presence of both armies, for the purpose of concealing the movements of troops, or bringing on a general battle.

**SLIP A CABLE.** To allow the whole cable attached to an anchor to run out, when, on account of all possible expedition being required, there is not time to weigh it in the usual manner.

**SPIKE.** To *spike* guns is to drive large nails into the vent, or touch-hole, to render them unserviceable for some time, till it can be cleared.

**SQUADRON.** In the army is a body of cavalry consisting of two troops. A *Squadron* in the navy is a small fleet not exceeding five ships.

**SQUARE.** A form into which infantry are thrown to resist a charge of cavalry—the soldiers all facing outwards, whatever their number.

**STARBOARD.** The right side of the ship to a spectator looking forwards.

**STAR FORTS.** Forts with several salient angles, in the form of a star, as generally represented.

**STORES,** military and marine. Arms, ammunition, provisions, clothes, and other necessaries.

**STRATEGY.** The science of war.

**STORM.** To make a powerful and vigorous assault on any position occupied by an enemy.

**SUBALTERN.** All military officers under the rank of a captain.

**SUTLER.** A camp-follower, who sells drink and provisions to the troops.

**TACTICS.** The science and art of disposing military and naval armaments for battle, often comprehending the whole science of war, and the means prepared for carrying it on.

**TENAILLE.** A work usually constructed on the lines of defence in front of the curtain. In modern fortification it has two faces, in line with those of the adjacent bastions, with an intermediate curtain parallel to that of the main works.

**TENAILLON.** Formerly a small work placed on each side of the ravelin, for additional strength.

**TOISE.** An old French measure of 6 French feet. The English fathom bears to the French toise the ratio of 1 to 1.066 nearly. Hence, for rough purposes, the English fathom may be accounted nearly equal to the French toise.

**TRAVERSES.** Generally parapets of earth, formed in the covered

way, to cover troops placed there from the enfilading fire of besiegers. Their superior slopes are directed to the salient angles, and are furnished with banquettes behind. Round the ends, next the crest of the glacis, there are cut passages for the transit of troops, designated *en crochet* or *en cremaillère*, according to their shape. In the course of a siege, traverses are made whenever they may be required to cover troops.

**TRENCHES.** Ditches made during a siege, to enable the besiegers to approach the works as securely as possible. They form a zig-zag shape, each portion clearing the guns of the place through each position.

**TROOP.** In the singular, generally signifies a company of dragoons, under the command of a captain.

**TROUS-DE-LOUP,** or wolf-holes. Are dug in the form of an inverted cone, having a small picket, sharpened at the top, fixed at the bottom.

**TRUCKS** of a gun-carriage. The wheels on which it is moved.

**TRUNNIONS** of a gun. The cylindrical arms by which it is attached to its carriage. To render guns useless, the trunnions are sometimes struck off.

**TUMBRILS.** Covered carts, employed to convey ammunition, the tools of pioneers, miners, &c.

**VAN** of an army. The front or first line.

**VAN,** in the navy. The first division of a fleet in one line, or occasionally the leading ship.

**VIDETTES** or **VEDETTES.** Sentries placed on outposts and elevated points, so as to be able to observe advantageously the approach of an enemy, and to give early notice of his movements.

**UNDER ARMS.** The condition of troops when assembled fully armed and accoutred.

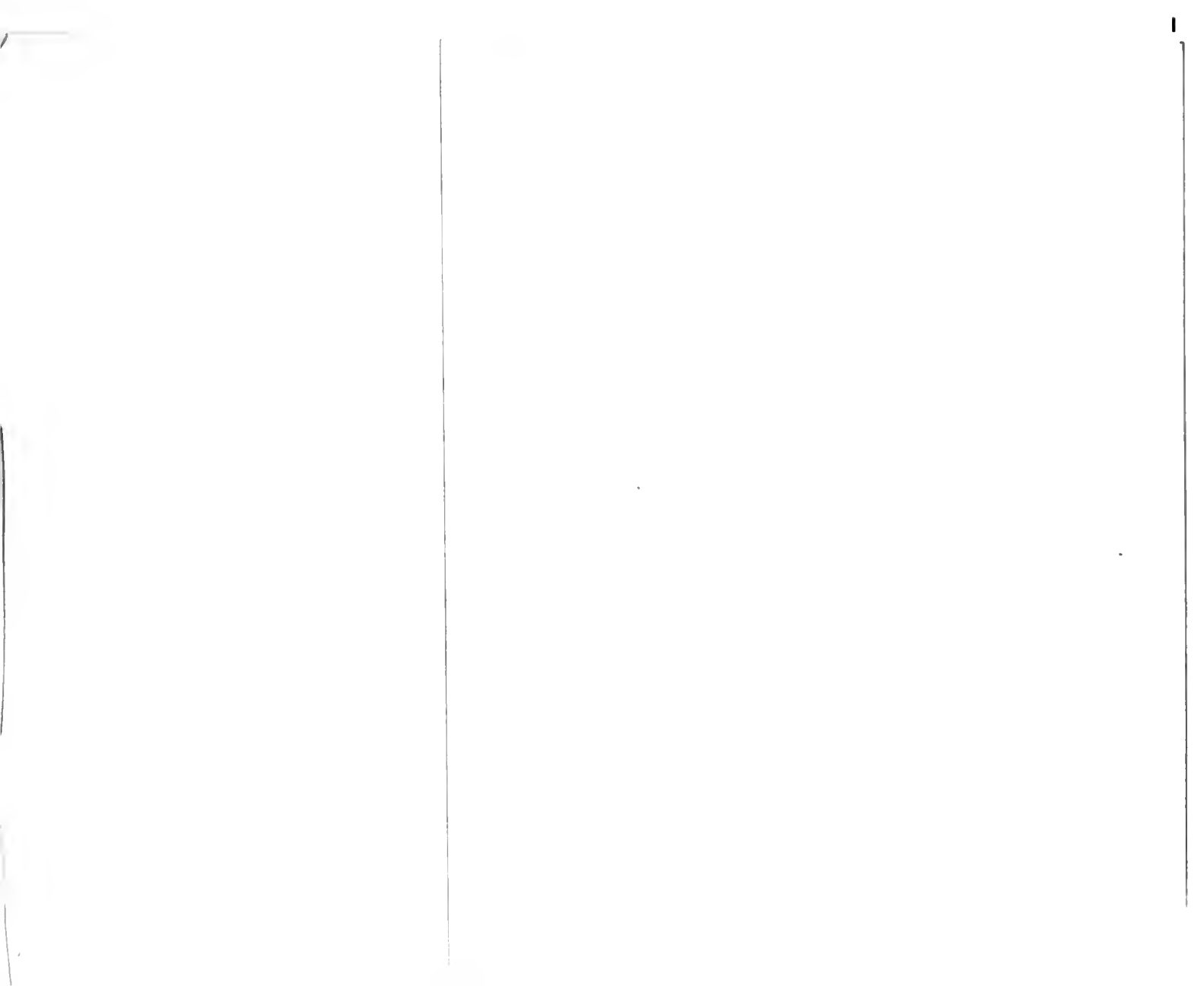
**WEAR** or **VEER.** To change a ship's course from one tack to another, by turning her stern to windward. This manœuvre is generally practised, when that of tacking, by turning her head to the wind, would be dangerous.

**WEATHER-GAUGE.** When one ship is to windward of another she is said to have the weather-gauge of her.

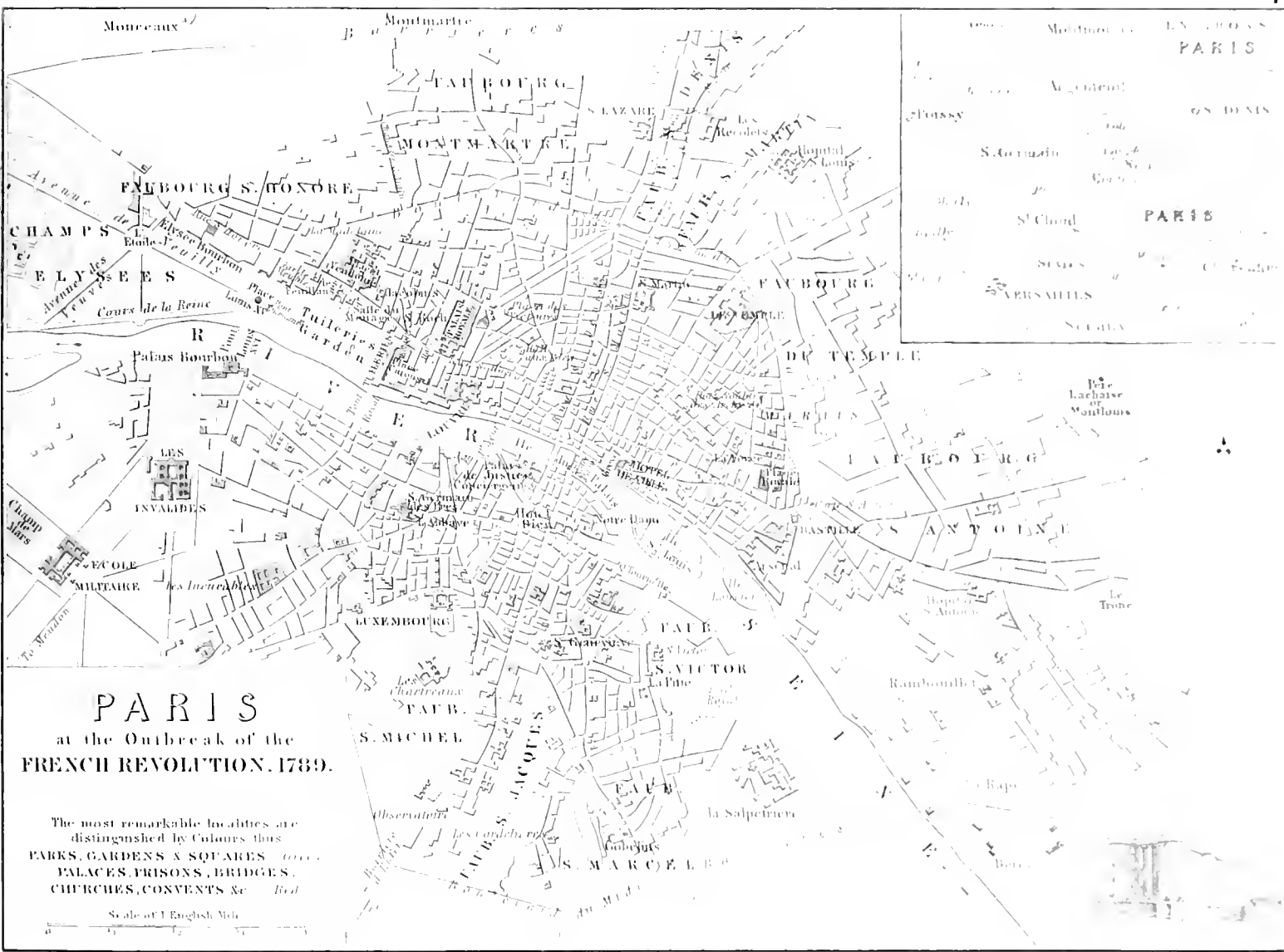
**To WINDWARD** is towards that part of the horizon from which the wind blows.

**WINGS** of an army. The extreme right and left divisions.







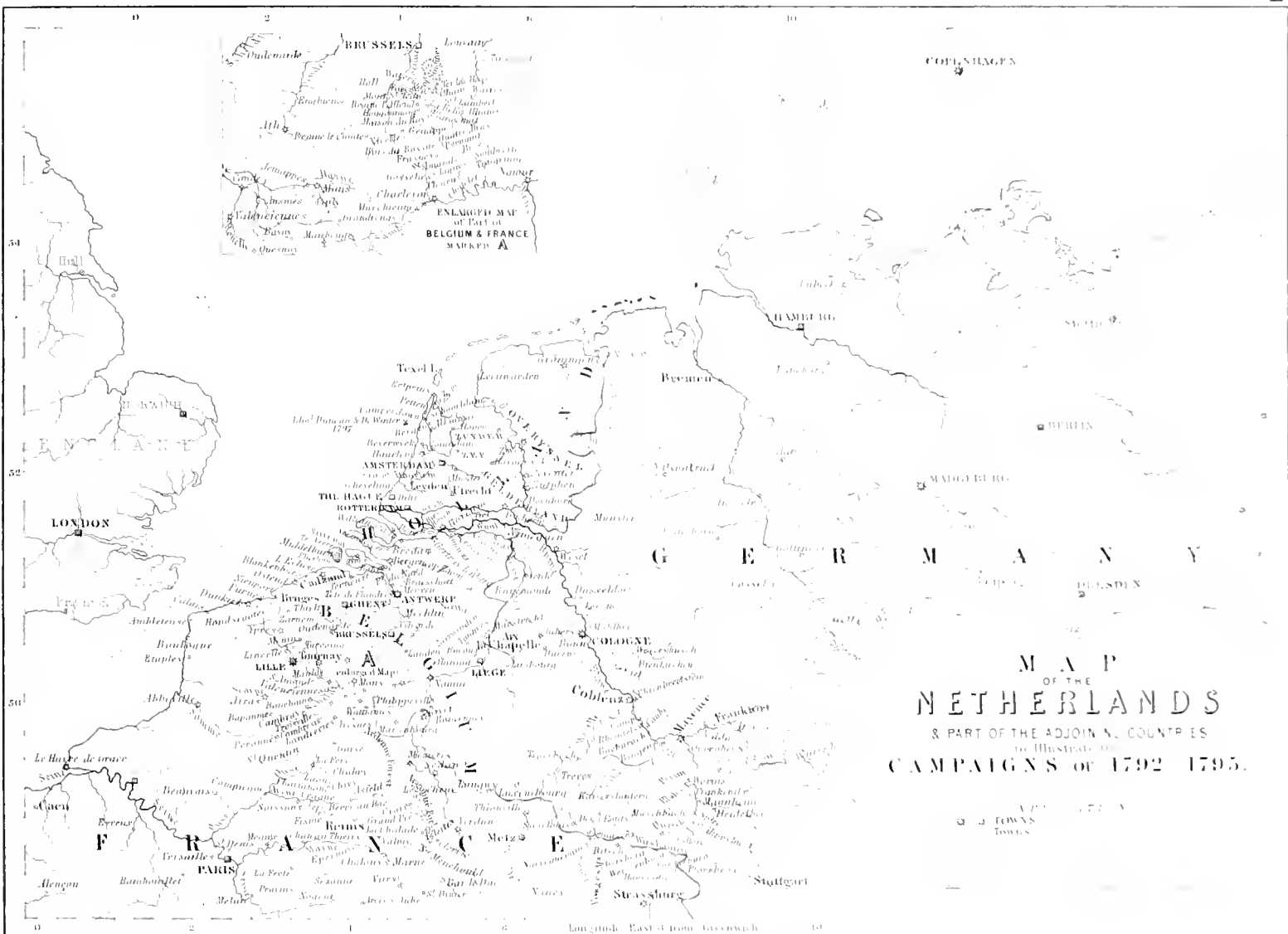


**PARIS**  
at the Outbreak of the  
**FRENCH REVOLUTION. 1789.**

The most remarkable localities are  
distinguished by Colours thus  
**PARKS, GARDENS & SQUARES** (green)  
**PALACES, PRISONS, BRIDGES,**  
**CHURCHES, CONVENTS &c** (red)

Scale of 1 English Mile  
0 1/4 1/2 3/4 1





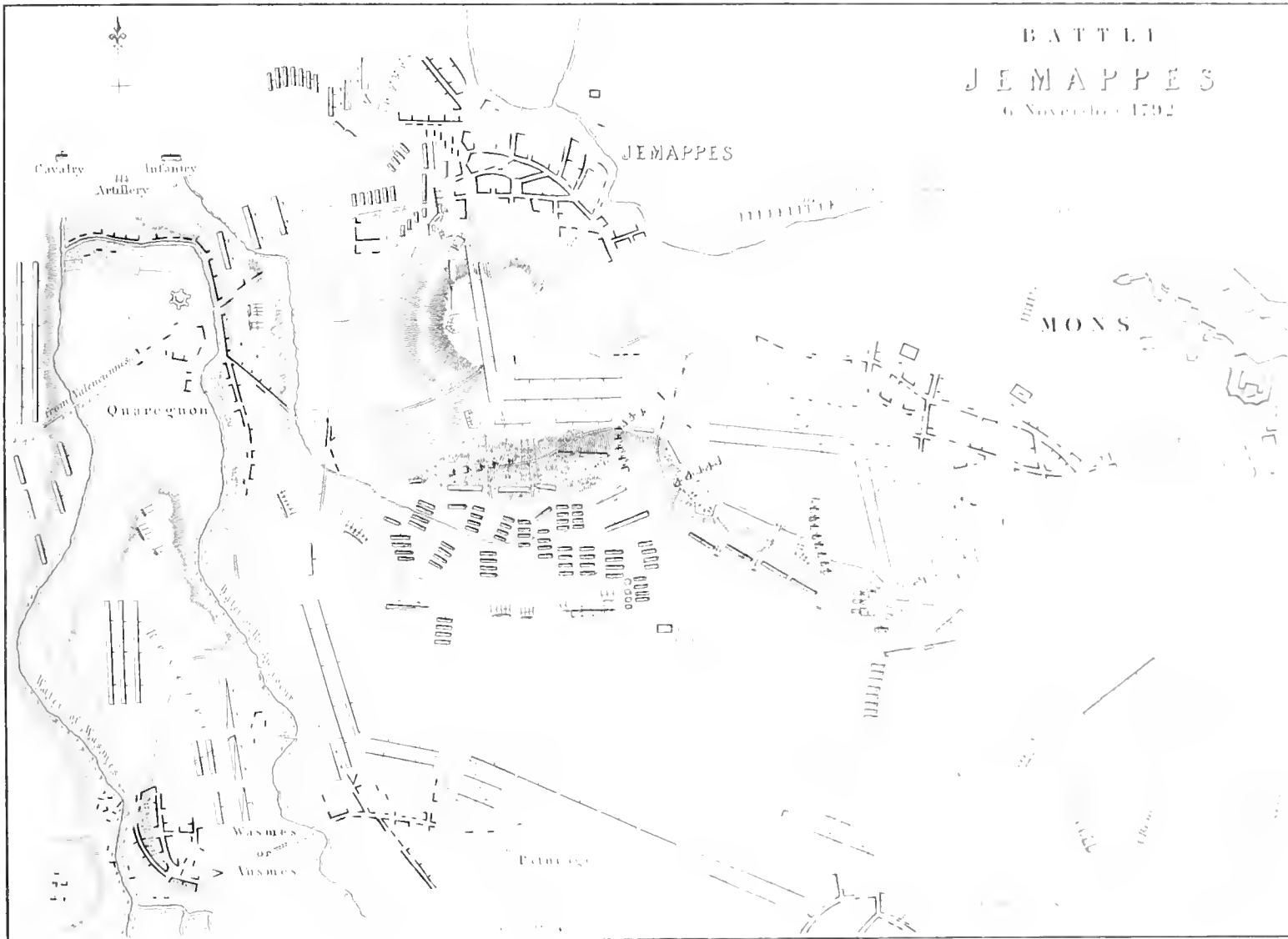
MAP  
OF THE  
NETHERLANDS  
& PART OF THE ADJOINING COUNTRIES  
to Illustrate  
CAMPAIGNS of 1792-1795.

▲ TOWNS  
● TOWNS



# BATTLE JEMAPPES

6 November 1792







# MAP OF FRANCE

to Illustrate the  
CAMPAIGNS OF 1795 ETC

## EXPLANATION

- TOWNS
- TOWNS
- TOWNS



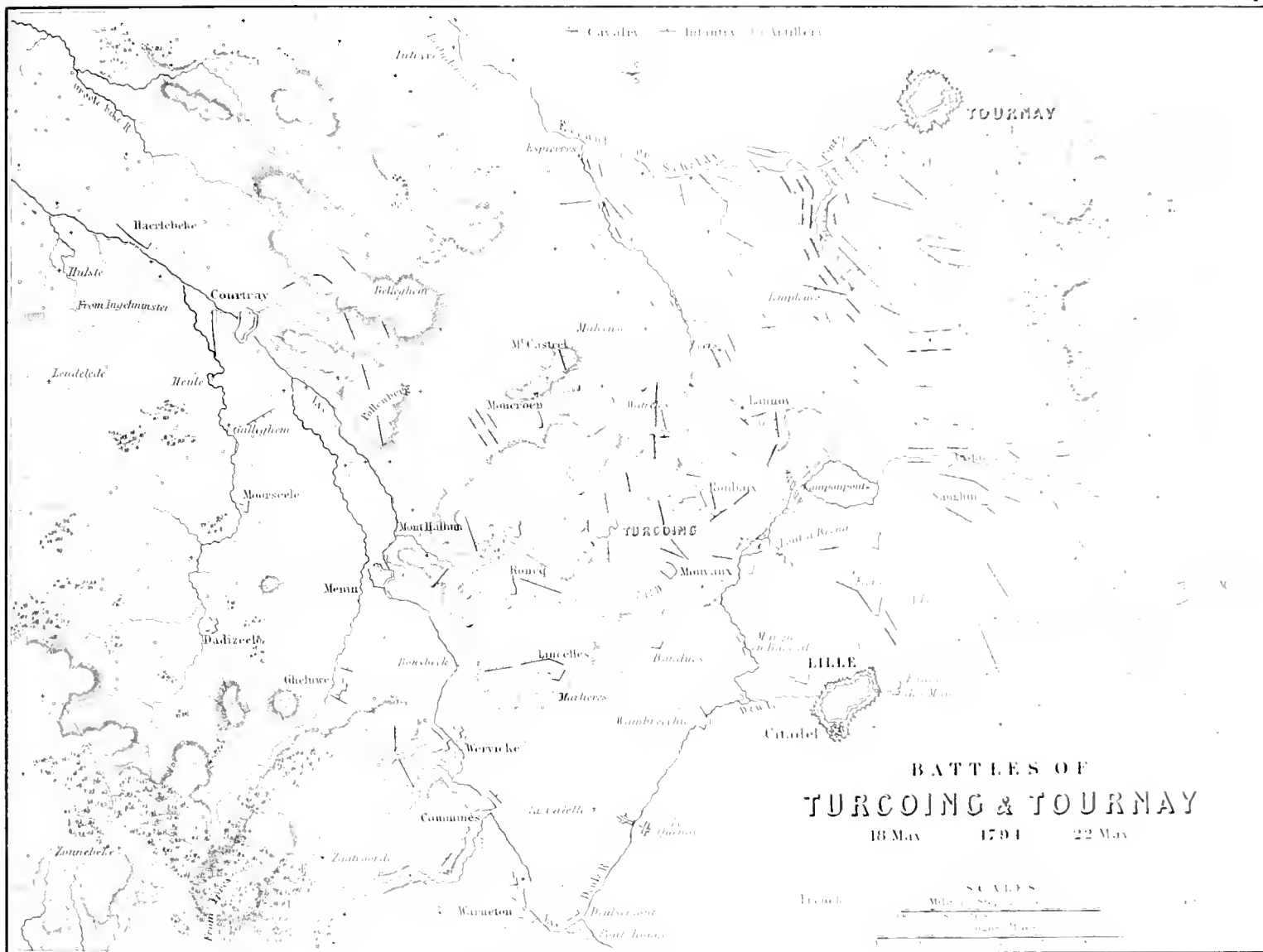






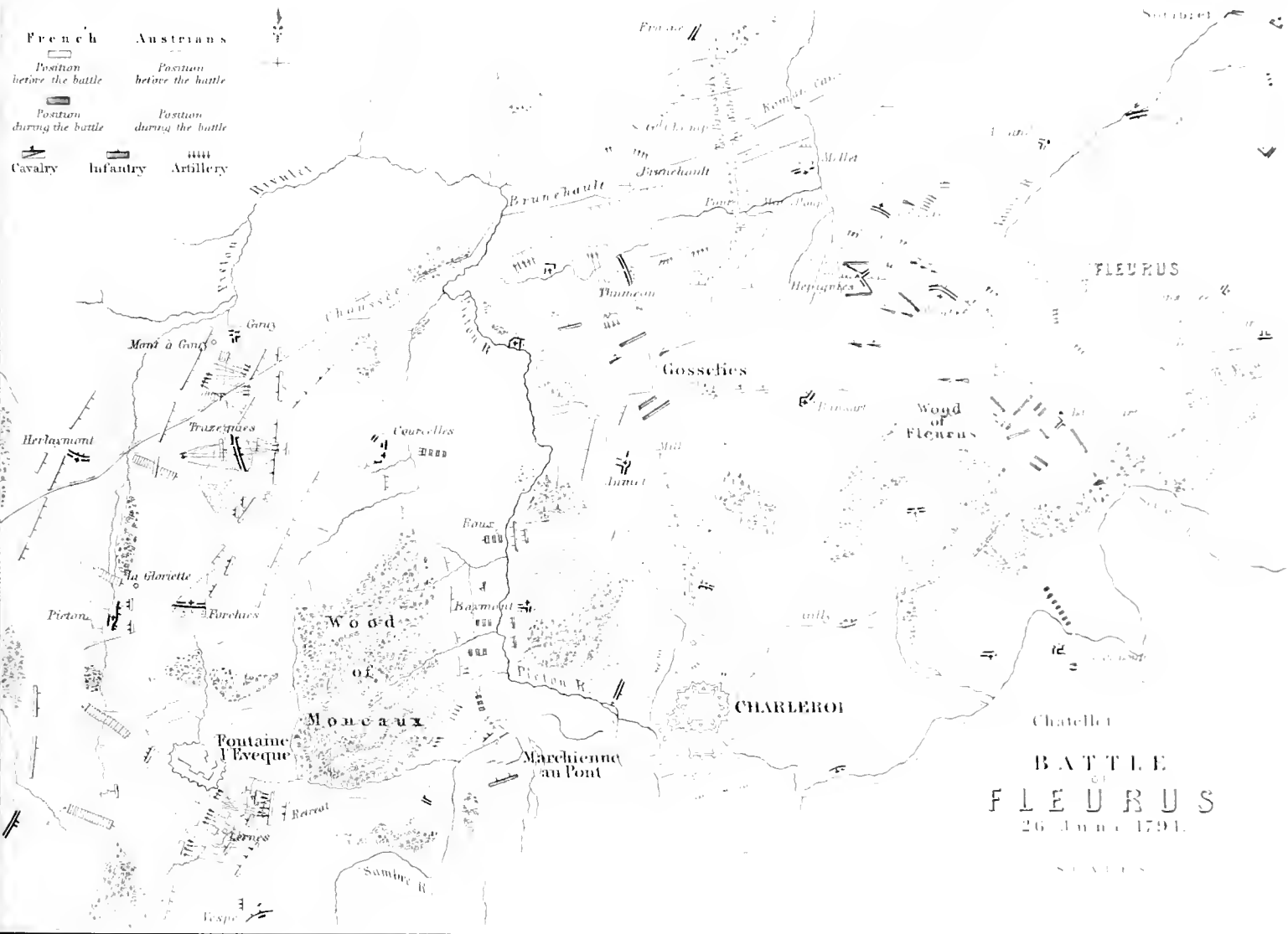






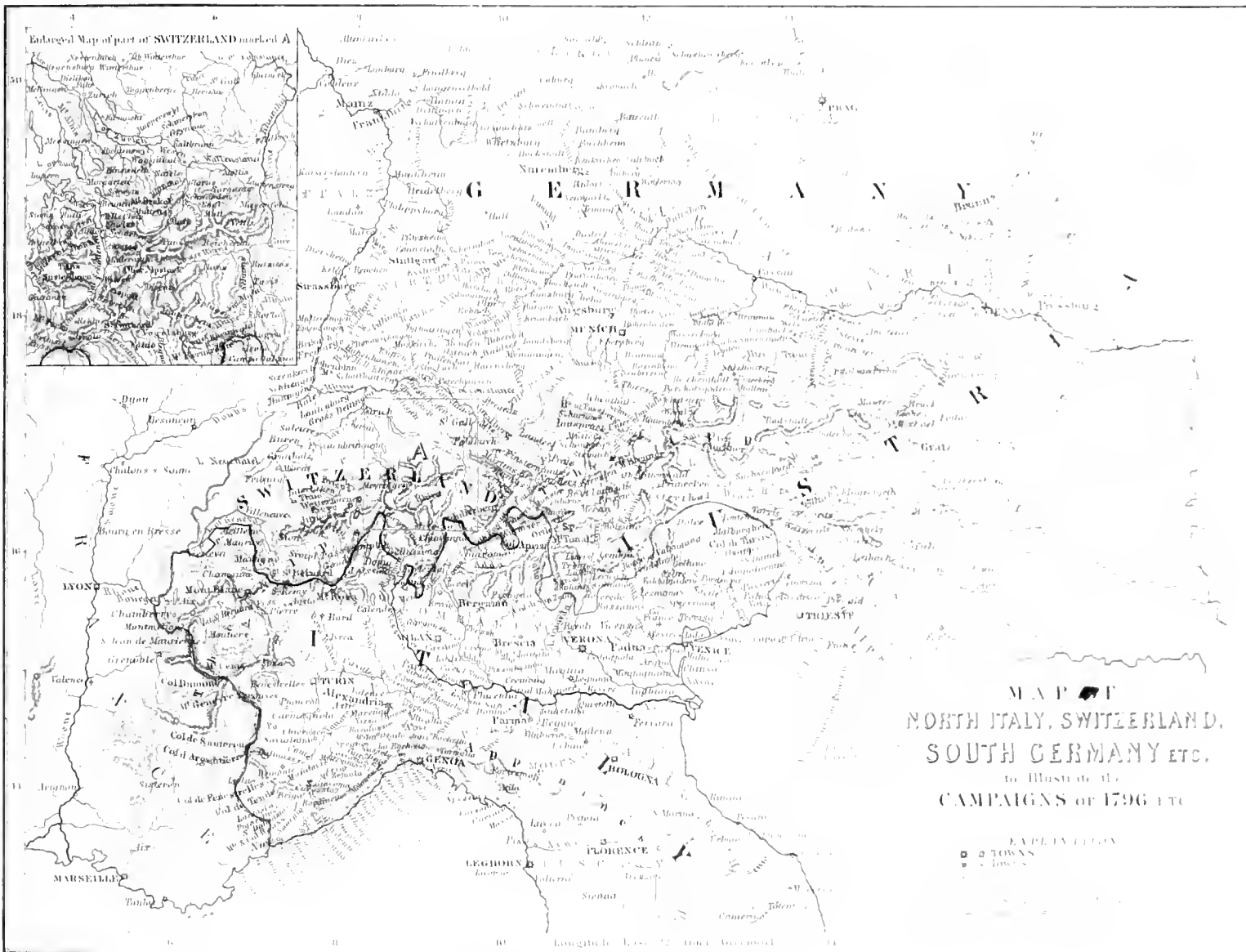








Enlarged Map of part of SWITZERLAND marked A



MAP OF  
NORTH ITALY, SWITZERLAND,  
SOUTH GERMANY etc.  
to illustrate the  
CAMPAIGNS of 1796 etc

EXPLANATION

□ TOWNS  
— RIVERS

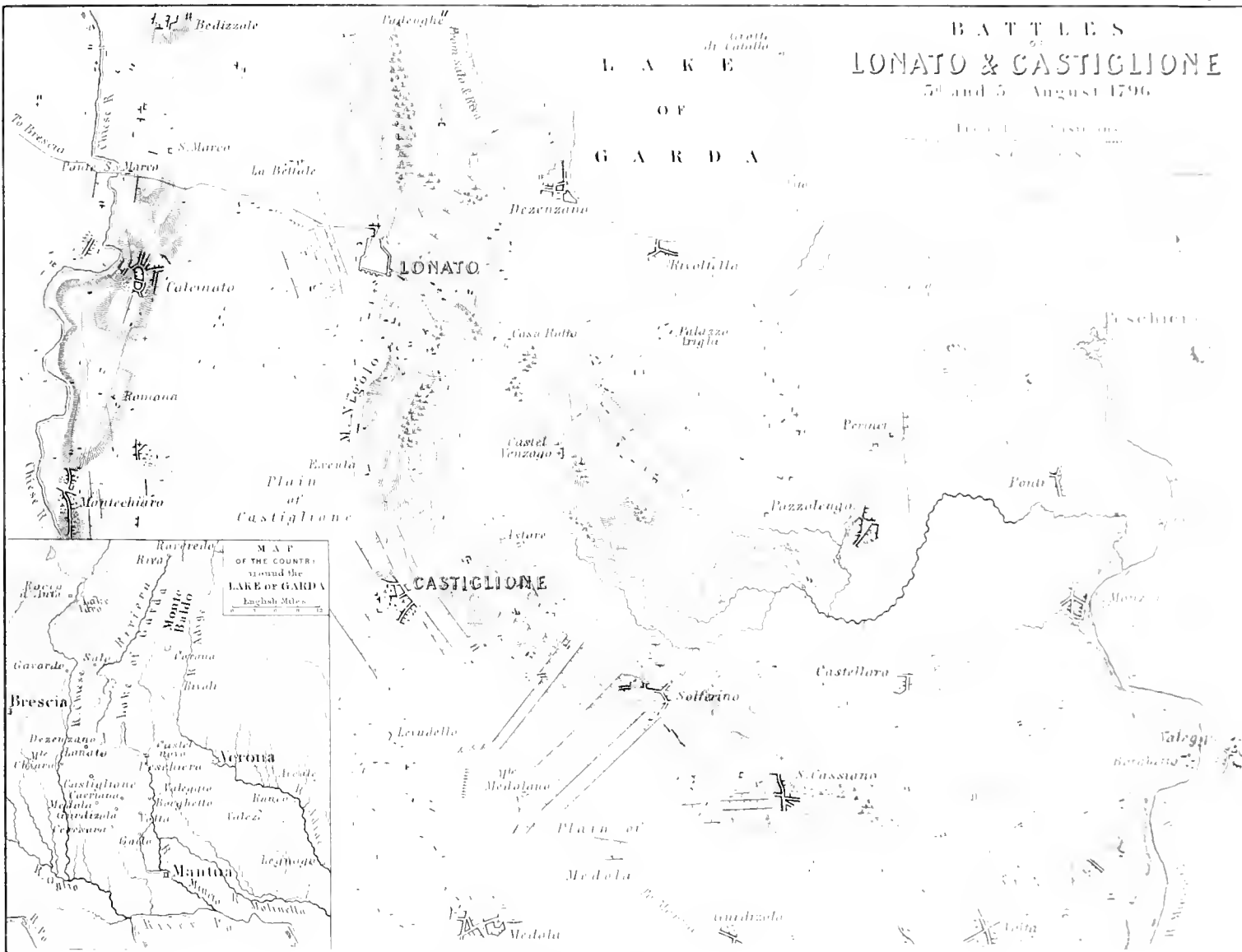


# BATTLES LONATO & CASTIGLIONE

5th and 5th August 1796

French Army  
Austrian Army

L A K E  
O F  
G A R D A

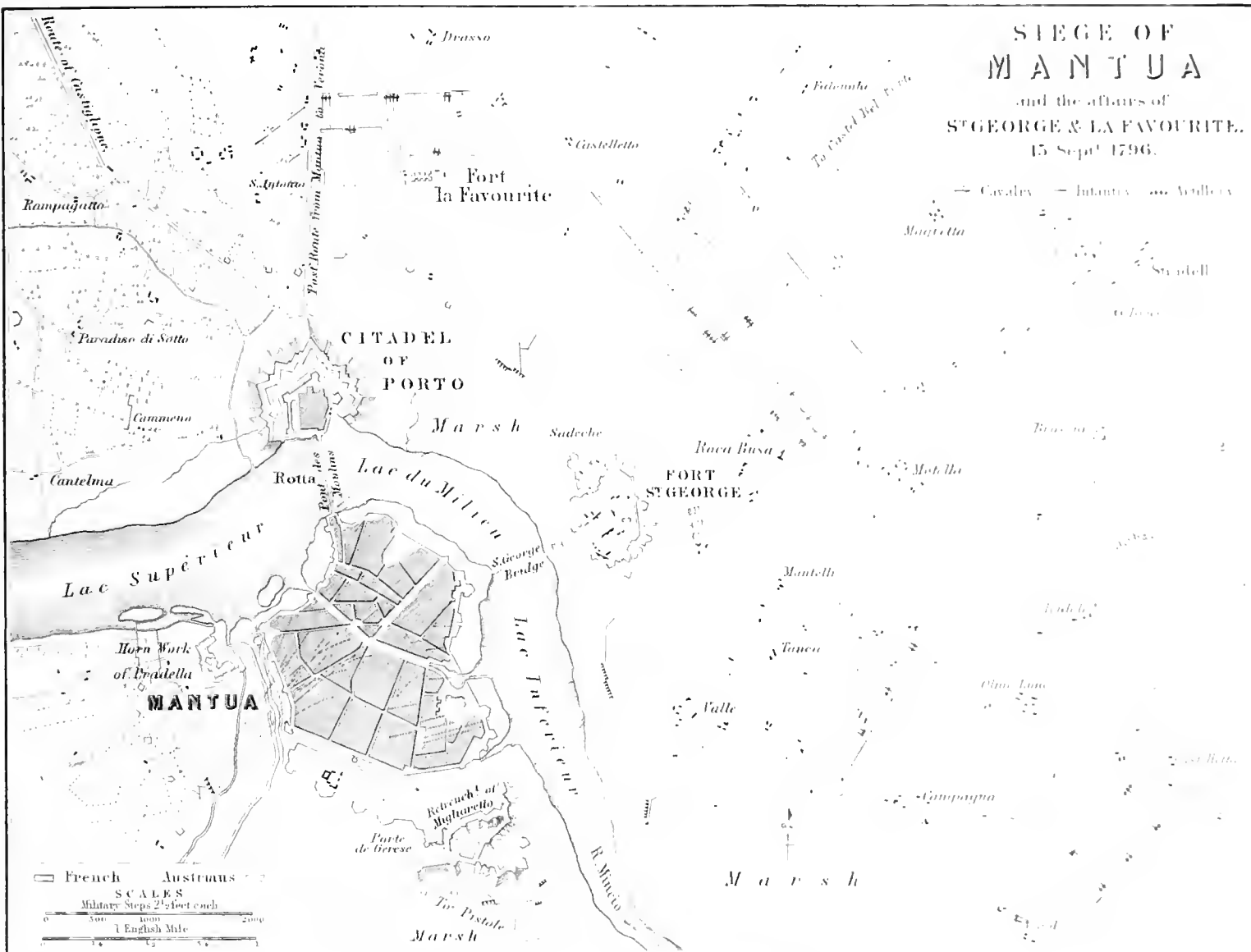


MAP  
OF THE COUNTRY  
AROUND THE  
LAKE OF GARDA  
English Miles  
0 5 10 15



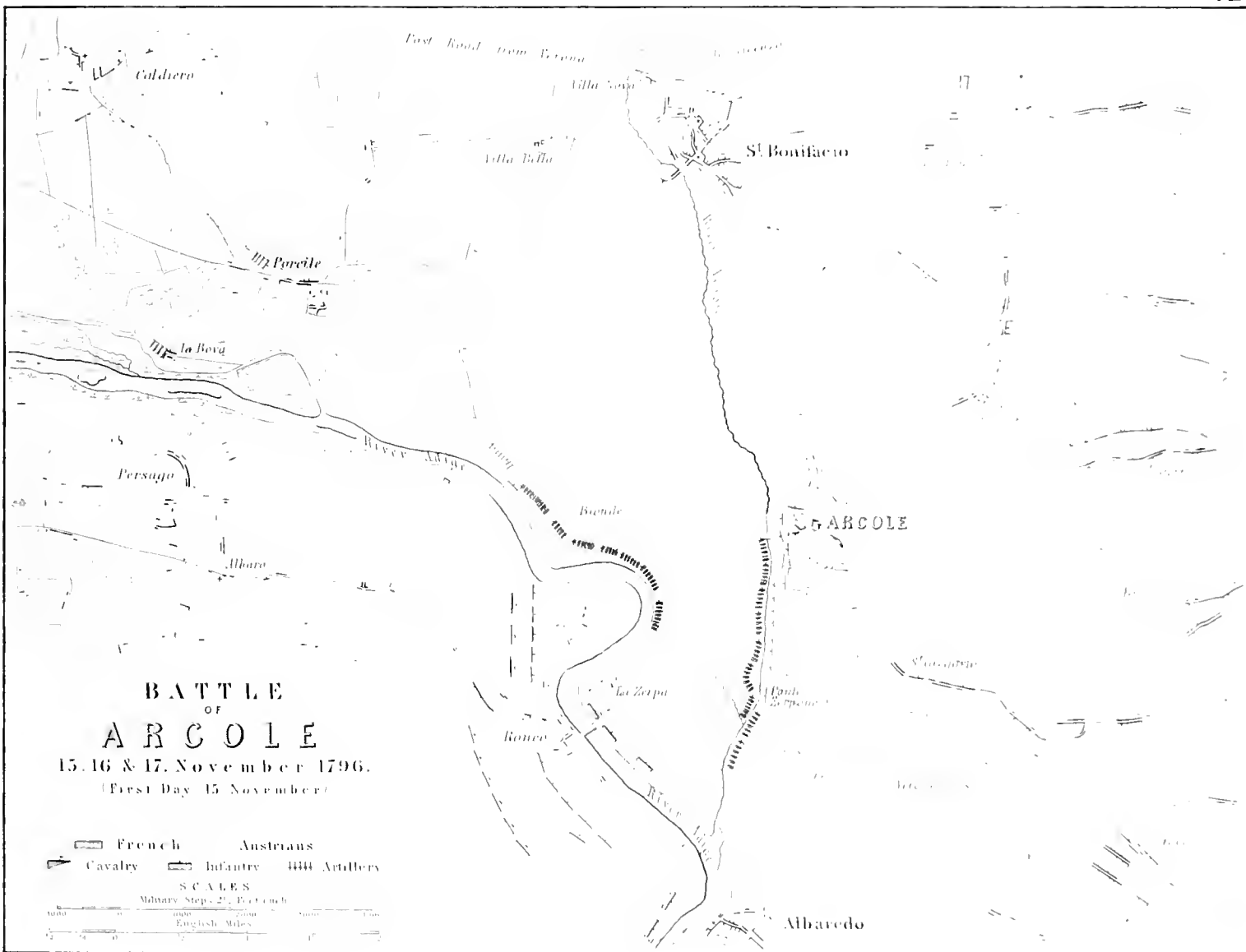
# SIEGE OF MANTUA

and the affairs of  
ST GEORGE & LA FAVOURITE.  
15 Sept 1796.

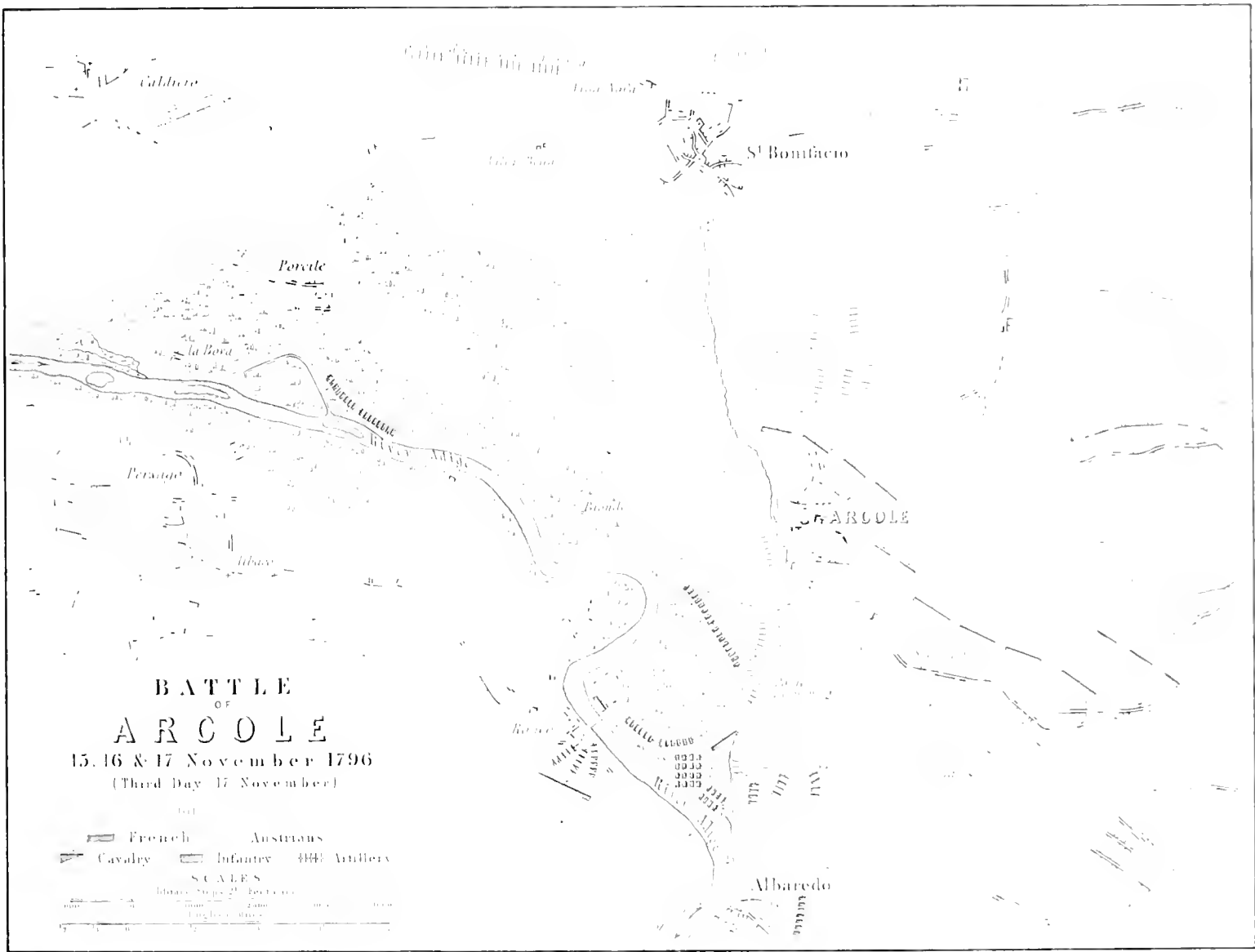












# BATTLE OF

## ARCOLE

15, 16 & 17 November 1796

(Third Day 17 November)

French      Austrians  
Cavalry      Infantry      Artillery

### SCALES

1 mile      1 km  
1/2 mile      1/2 km  
1/4 mile      1/4 km  
1/8 mile      1/8 km  
1/16 mile      1/16 km





















# BATTLE OF THE NILE

1<sup>st</sup> August 1798

— British — French —

B A Y O F A B O U K I R

PLAN  
of the  
BAY OF ABOUKIR  
showing the site of  
THE BATTLE.

Aboukir  
Castle

B A Y O F A B O U K I R

PENINSULA  
OF  
ABOUKIR

Lake  
Mandieh

Shoals without sufficient depth of water  
for Ships of the Line

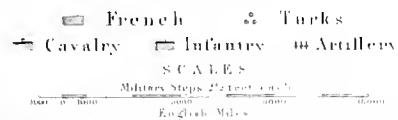
Aboukir I.

ABOUKIR  
CASTLE



# BATTLE OF MOUNT THABOR

16<sup>th</sup> April 1799







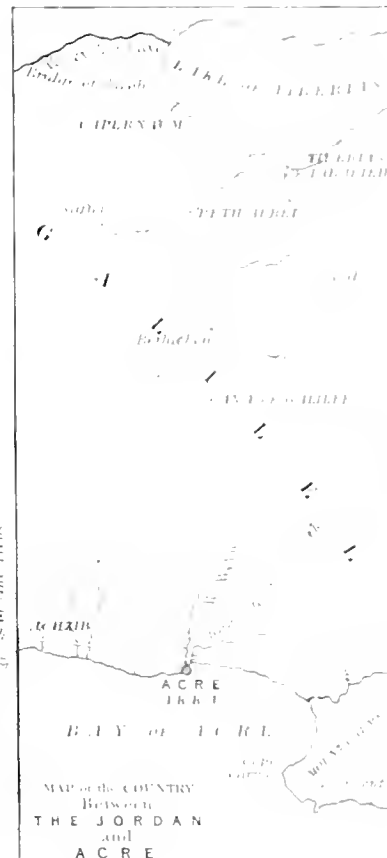




# SIEGE OF ST JEAN D'ACRE

By the French Army of Egypt  
From 19 March to 21 May 1799

Scale  
1 inch = 1 mile

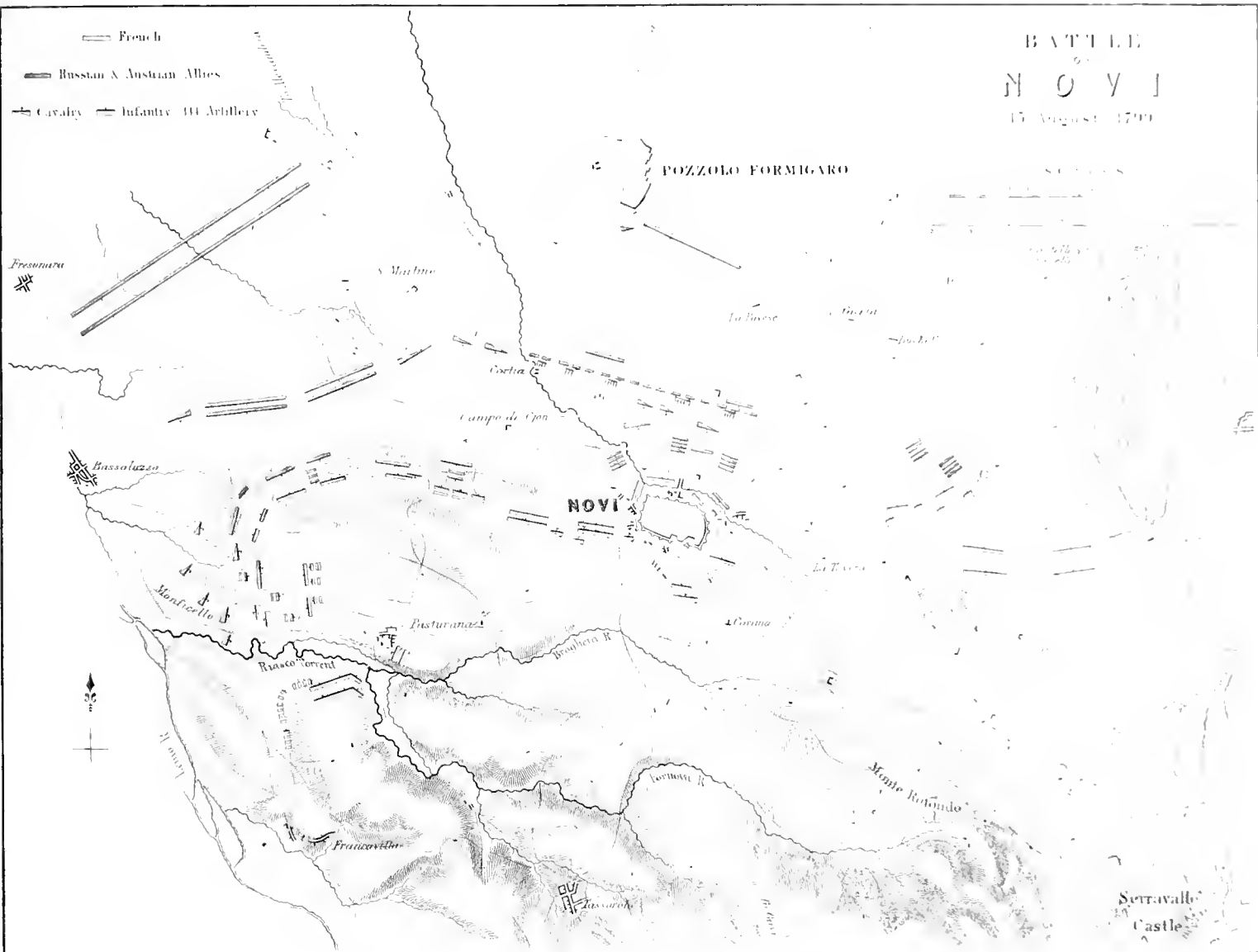


The French vessels were captured  
by Sir Sidney Smith











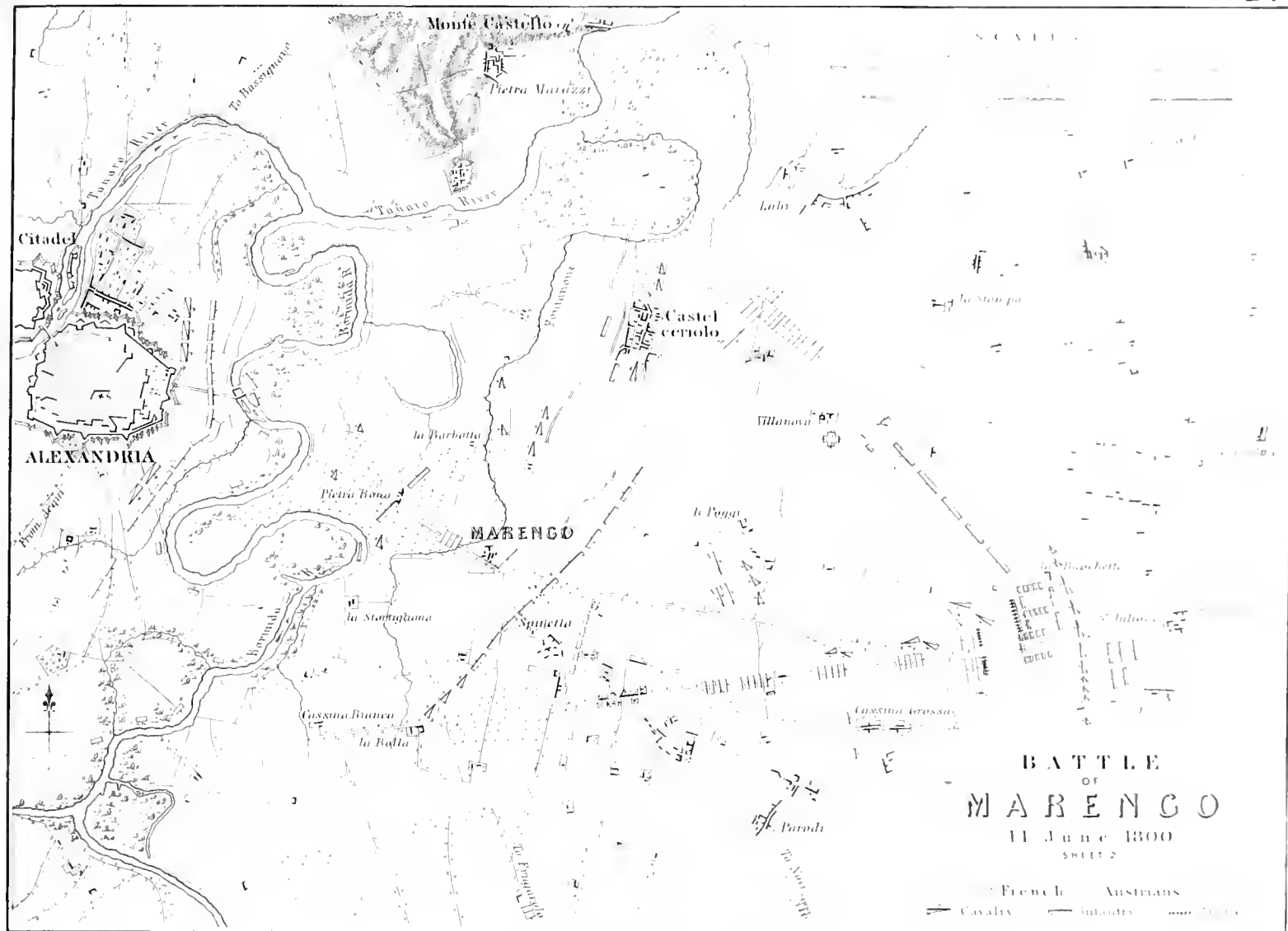














# BATTLE OF HOHENLINDEN

5<sup>th</sup> December 1800.

SHEET I

## SCALES

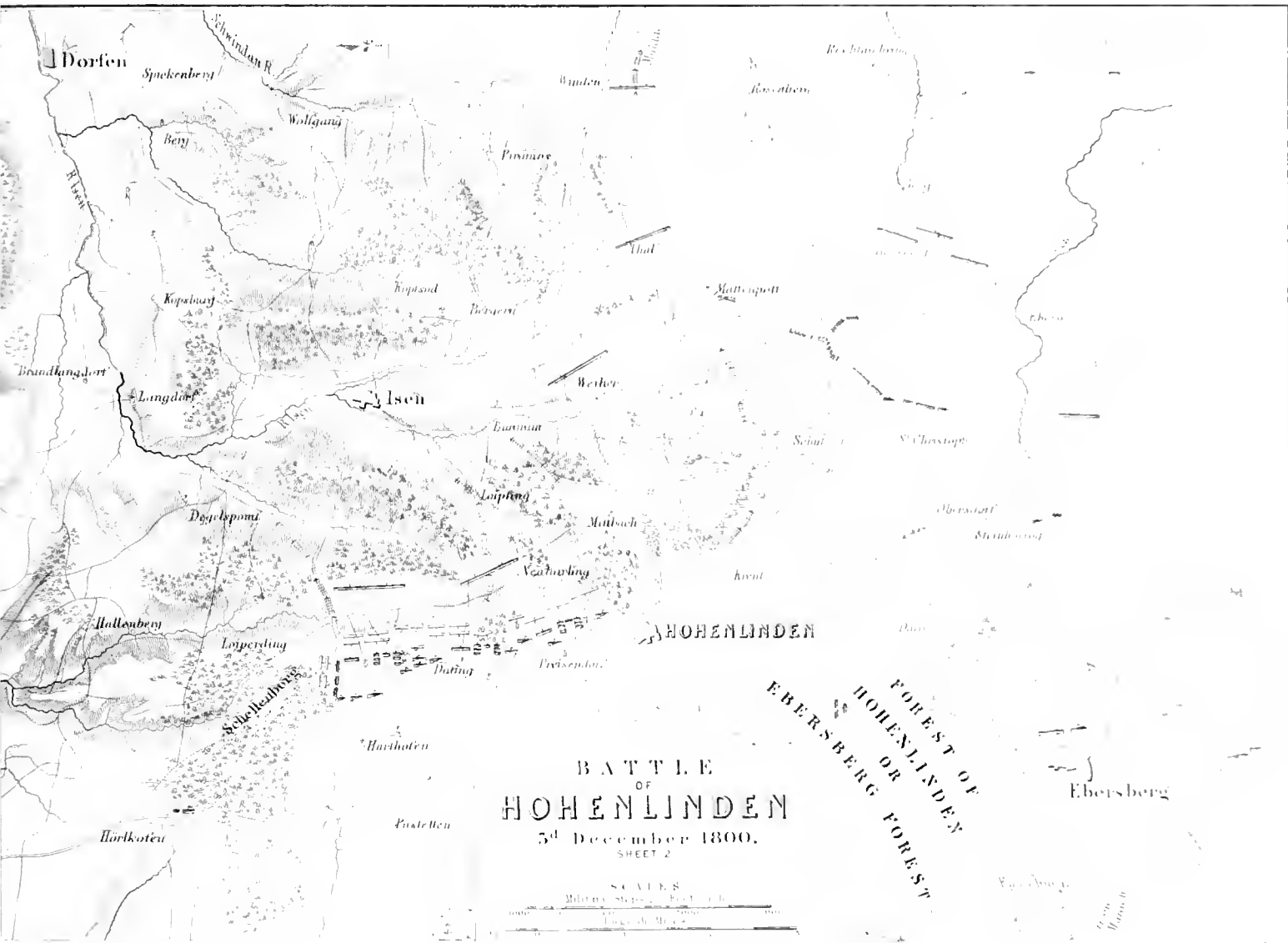
Military Steps 2½ Feet each  
English Miles

MAP  
OF THE COUNTRY  
Between the  
DANUBE  
and the  
IN N.









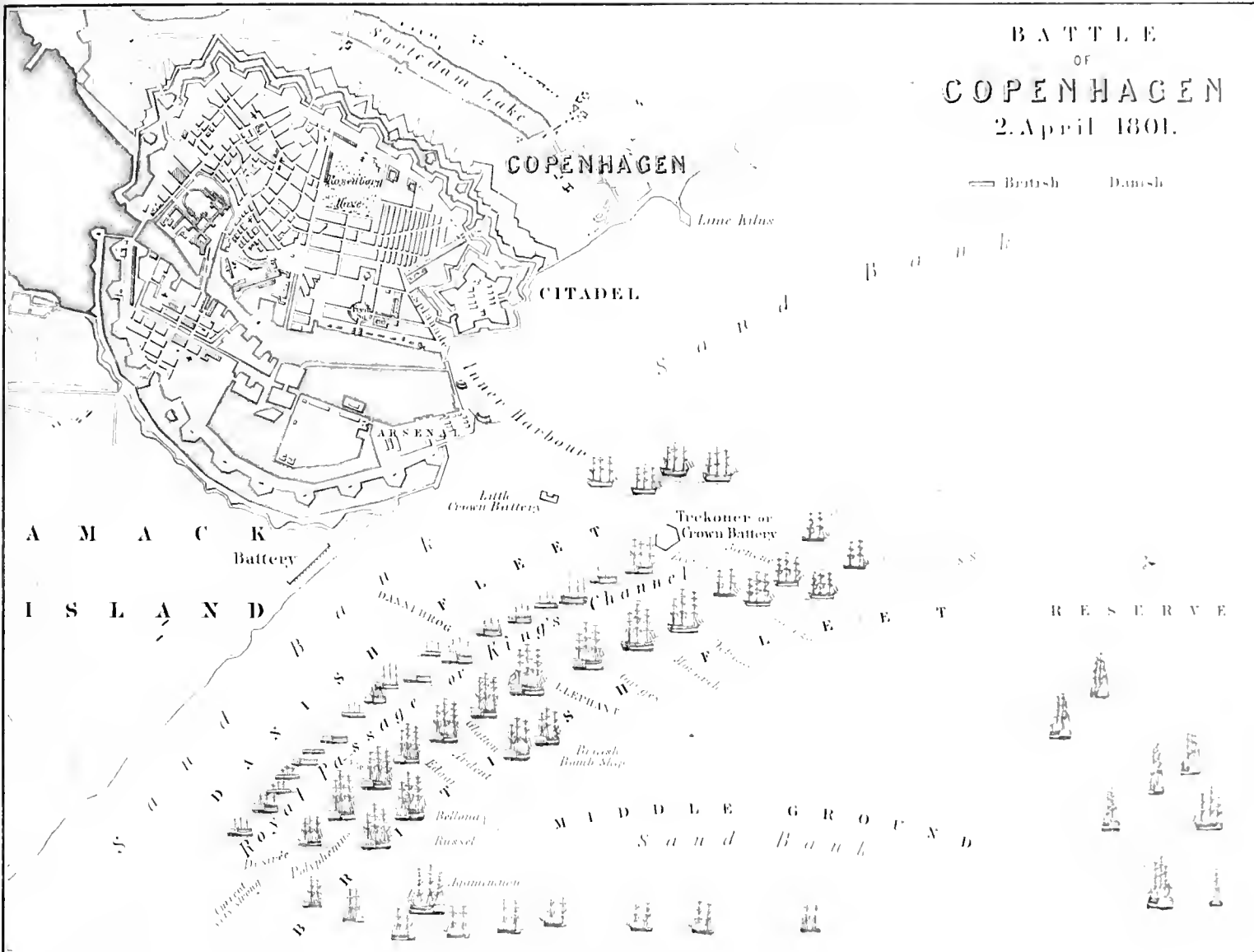




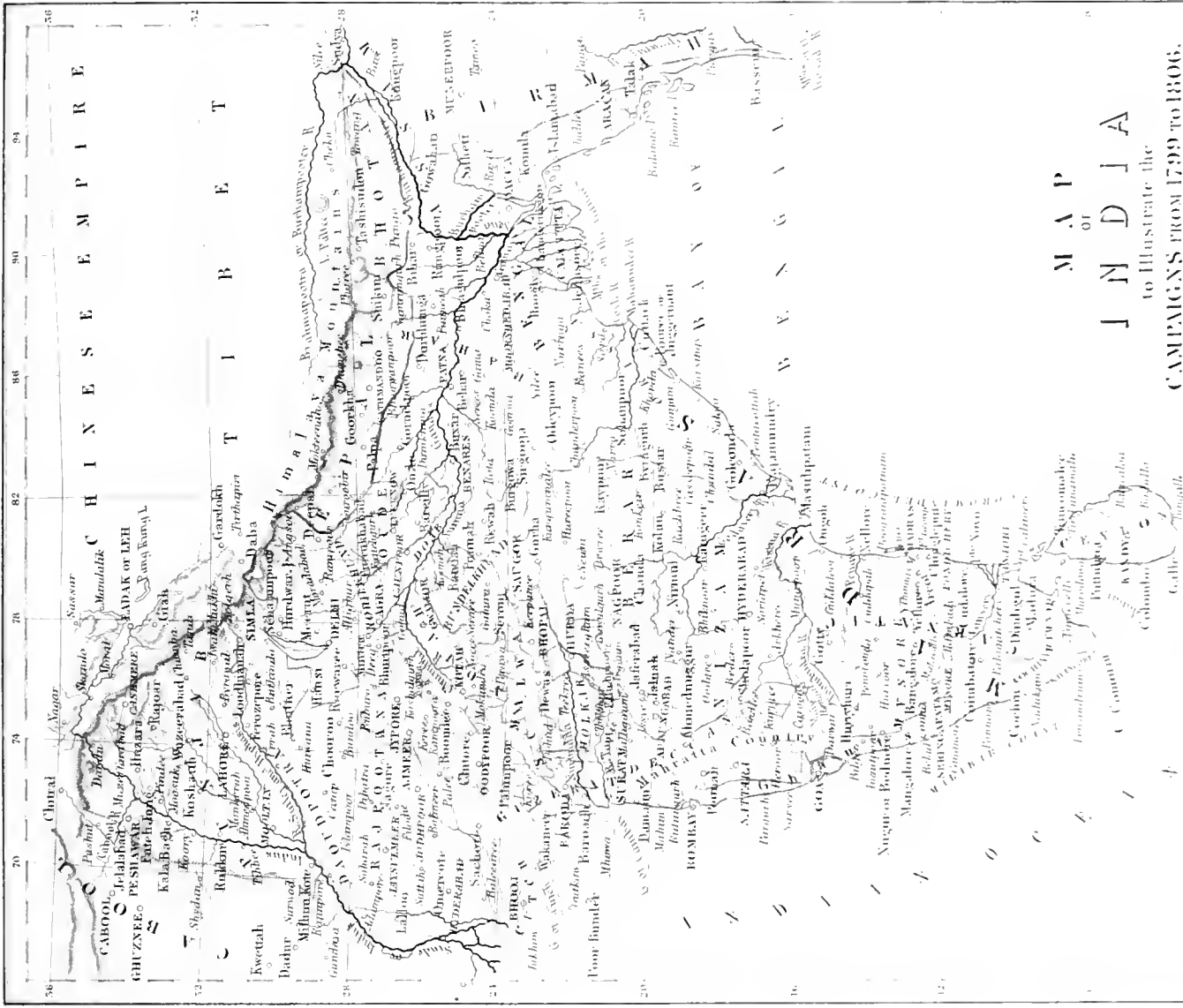


# BATTLE OF COPENHAGEN 2 April 1801.

British Danish





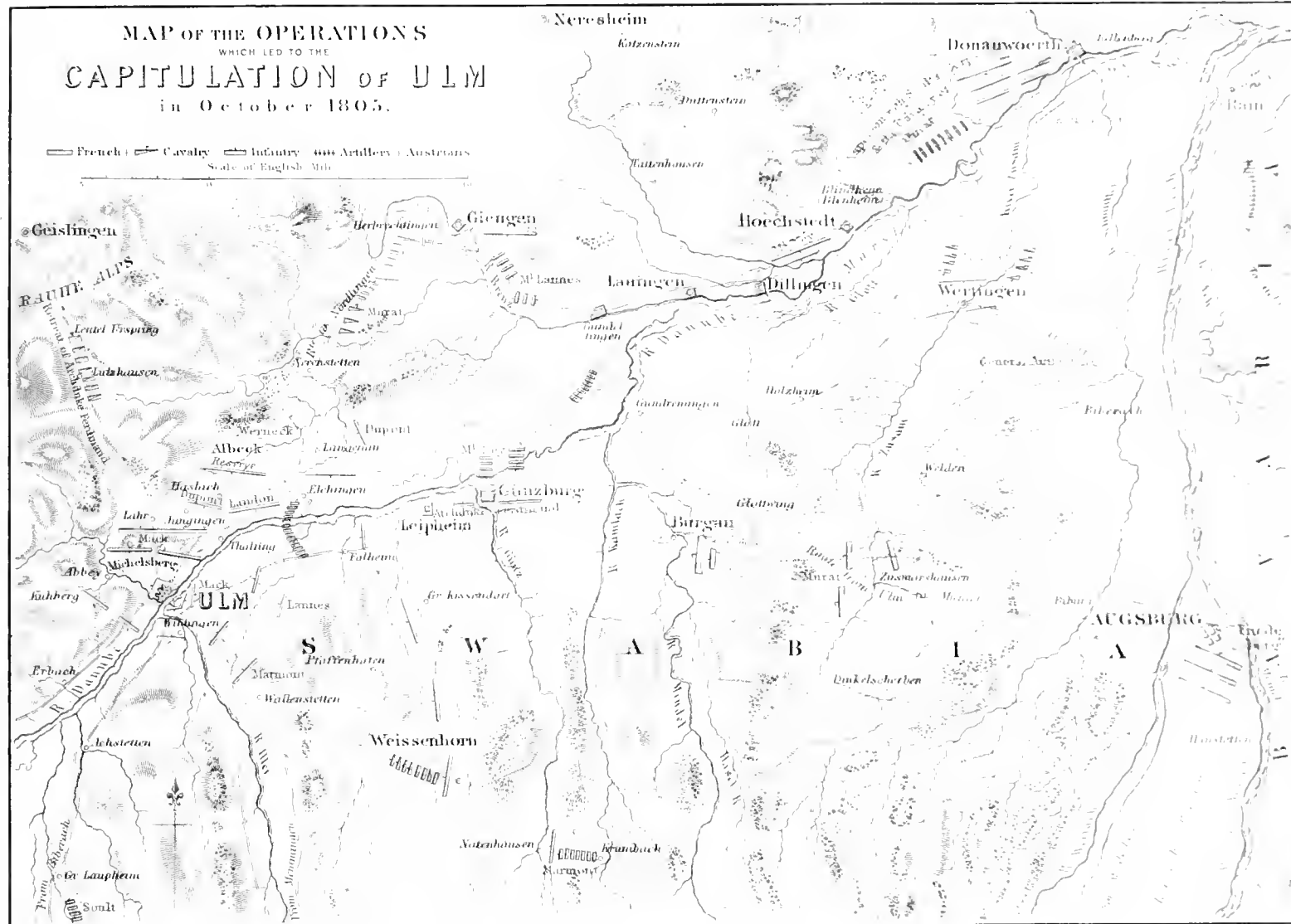






MAP OF THE OPERATIONS  
WHICH LED TO THE  
**CAPITULATION OF ULM**  
in October 1805.

— French — Cavalry — Infantry — Artillery — Austrians  
Scale of English Miles





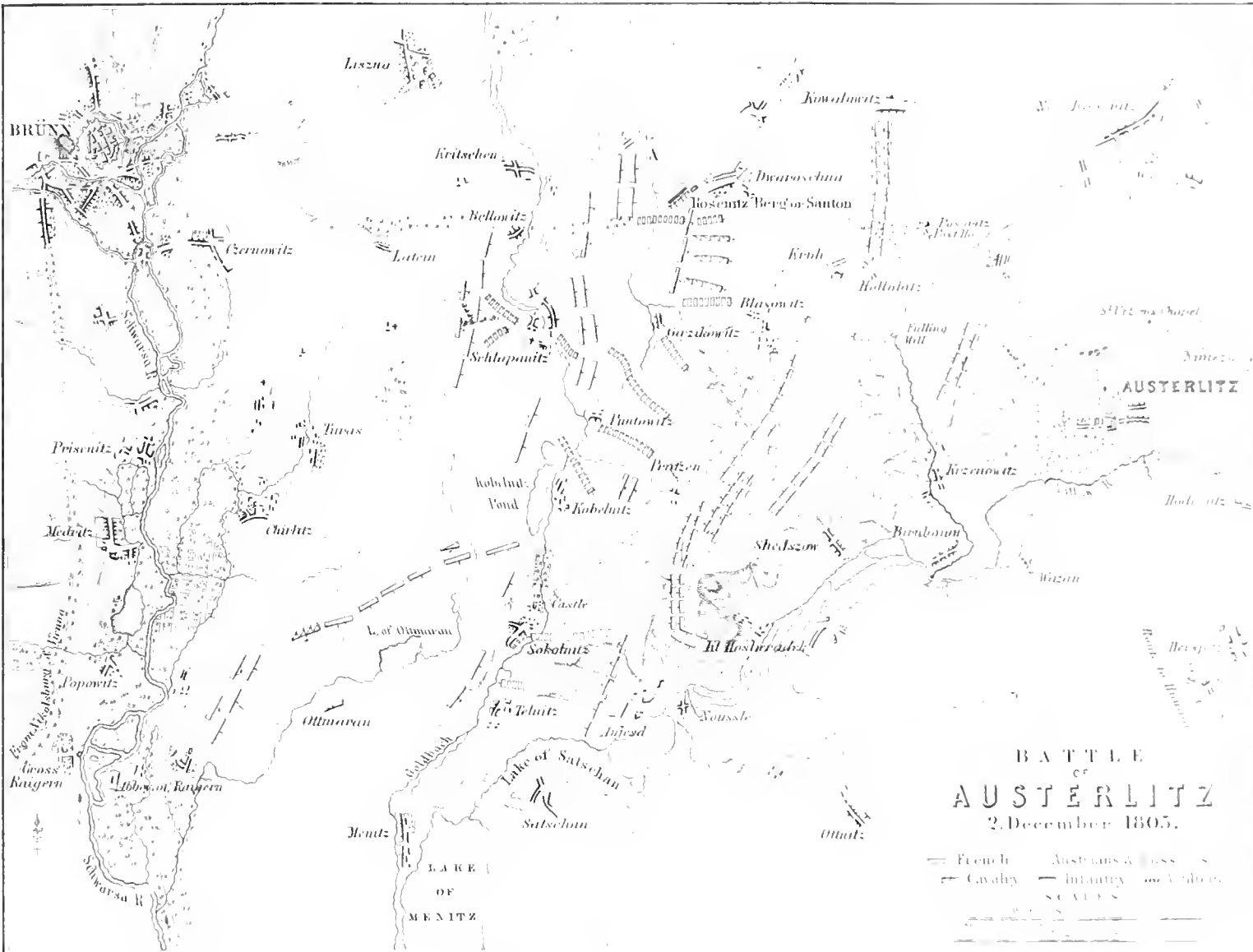


### REFERENCES







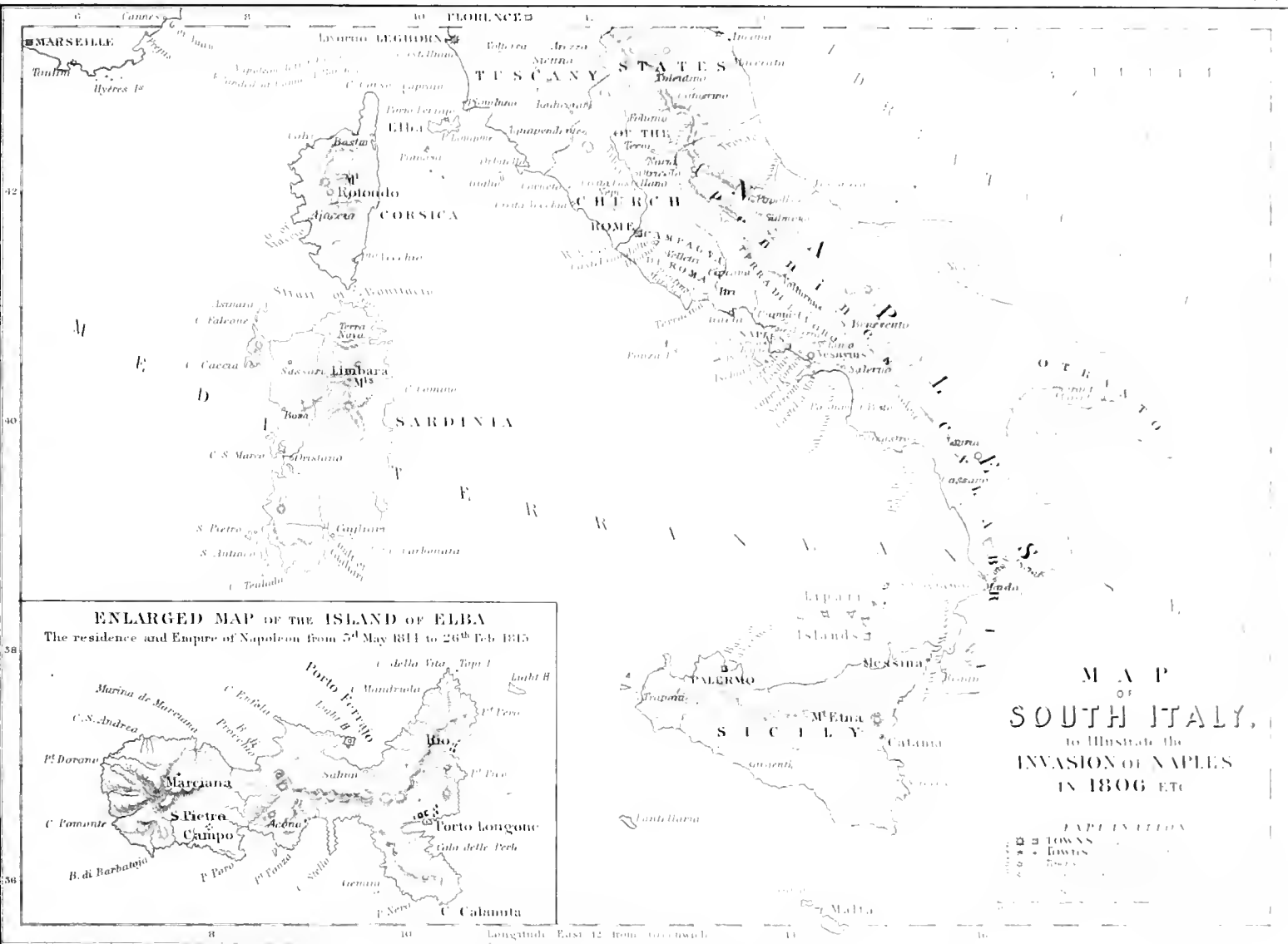


BATTLE  
OF  
AUSTERLITZ  
2 December 1805.

— French — Austrians & Russians  
— Cavalry — Infantry — Artillery



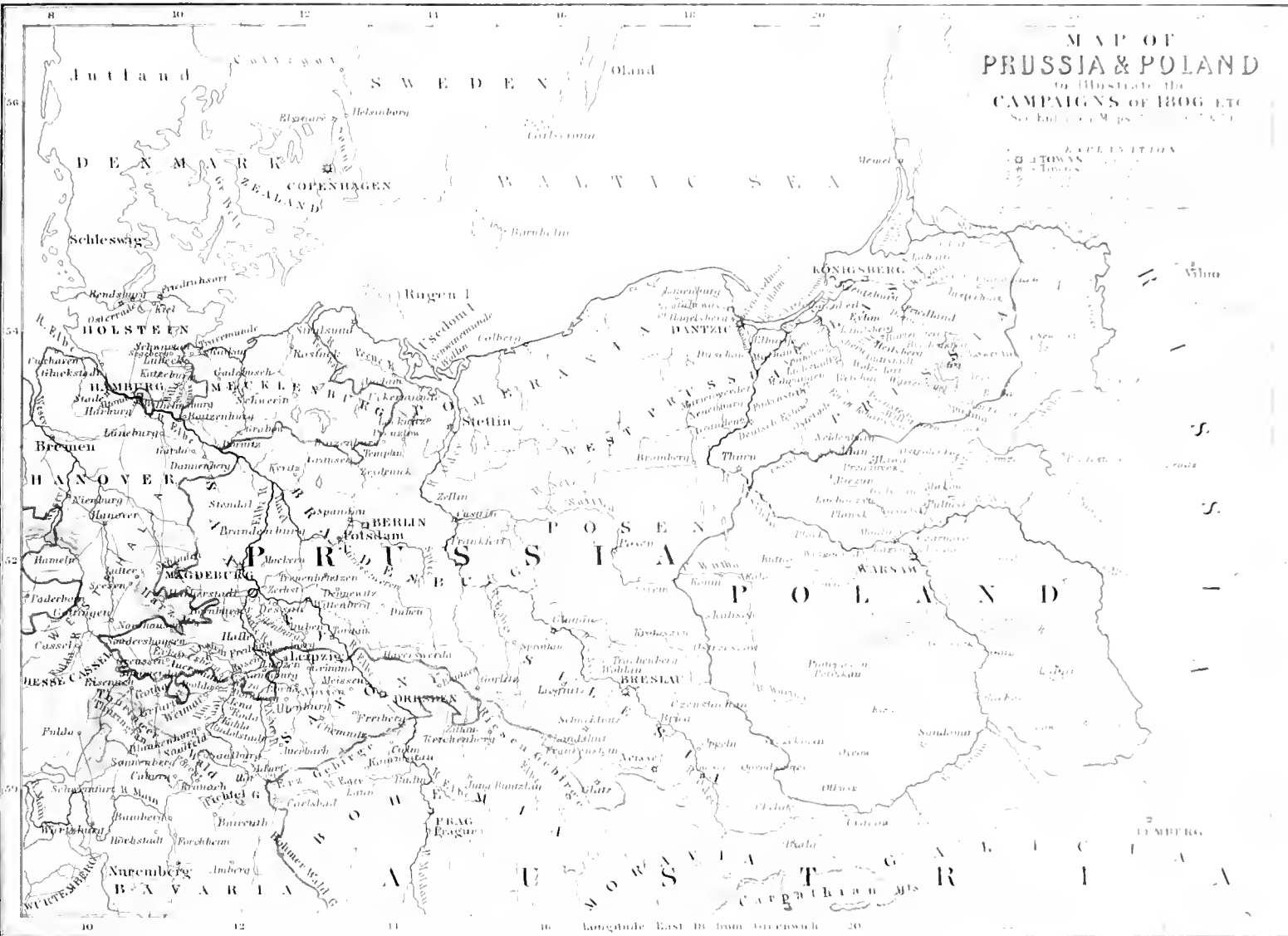






MAP OF  
PRUSSIA & POLAND  
to illustrate the  
CAMPAIGNS of 1806, ETC.  
See Index to Maps 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

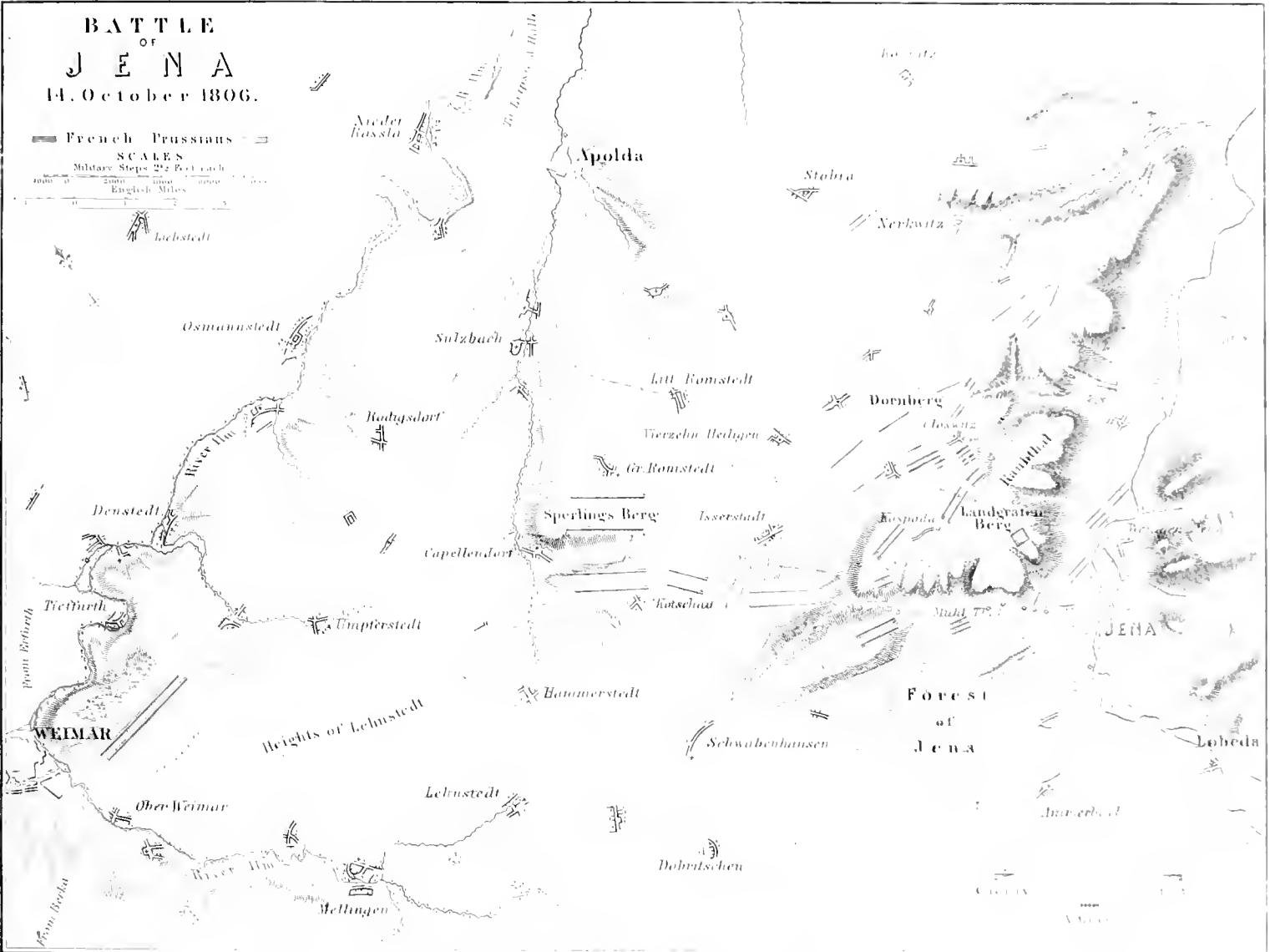
EXPLANATION  
TOWNS  
RIVERS





# BATTLE OF J E N A 14. October 1806.

French Prussians  
S C A L E S  
Military Scale 2 1/2 Poles each  
English Miles





# BATTLE OF AUERSTÄDT

11th October 1806

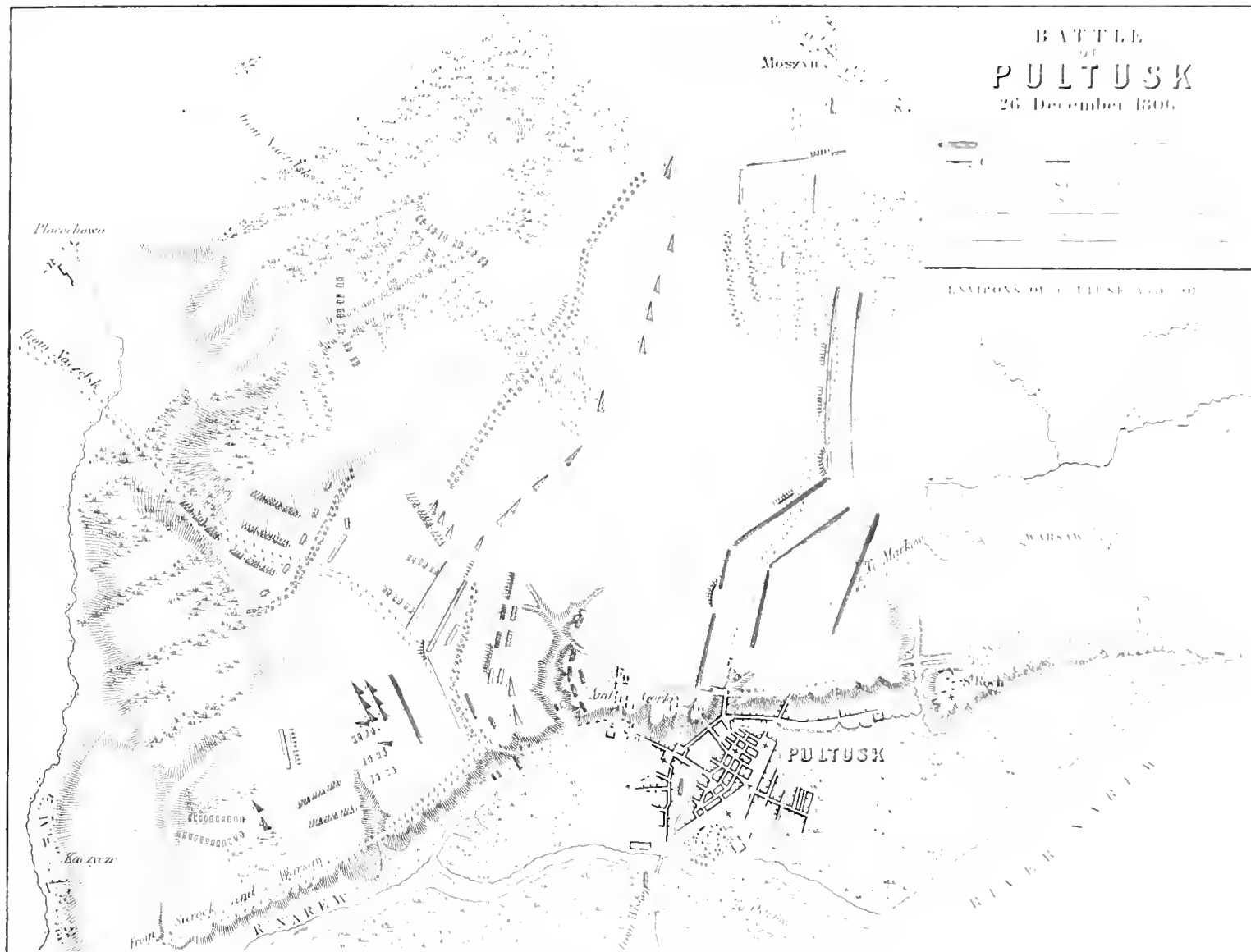






BATTLE  
OF  
**PULTUSK**  
26 December 1806

LEGEND OF THE MAP



















# BATTLE OF FRIEDLAND

14. June 1807.

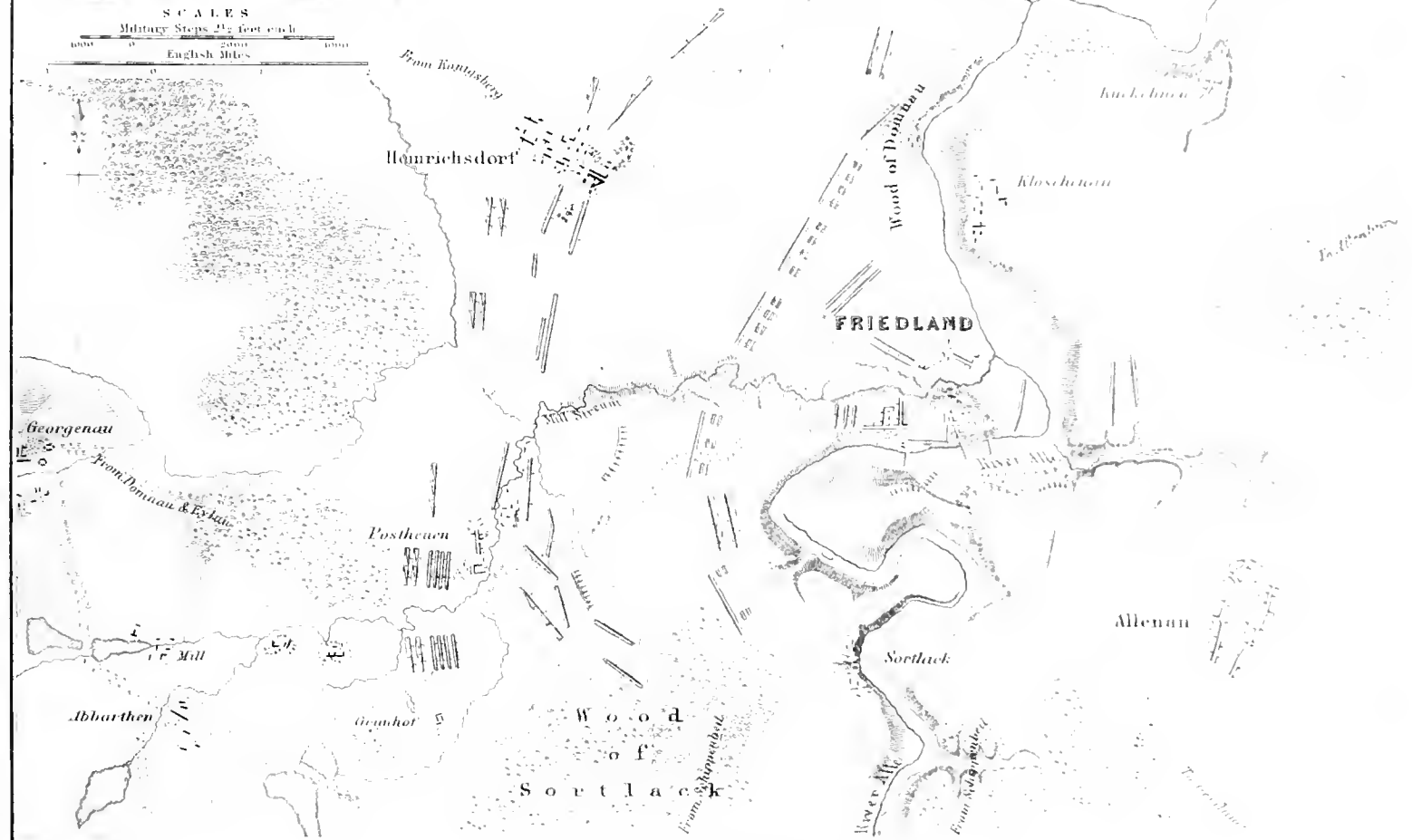
☞ Cavalry ☞ Infantry ☞ Artillery

☞ French ☞ Russians

SCALES

Military Steps 2½ feet each

English Miles



















# BATTLE OF VIMEIRA

21<sup>st</sup> August 1808

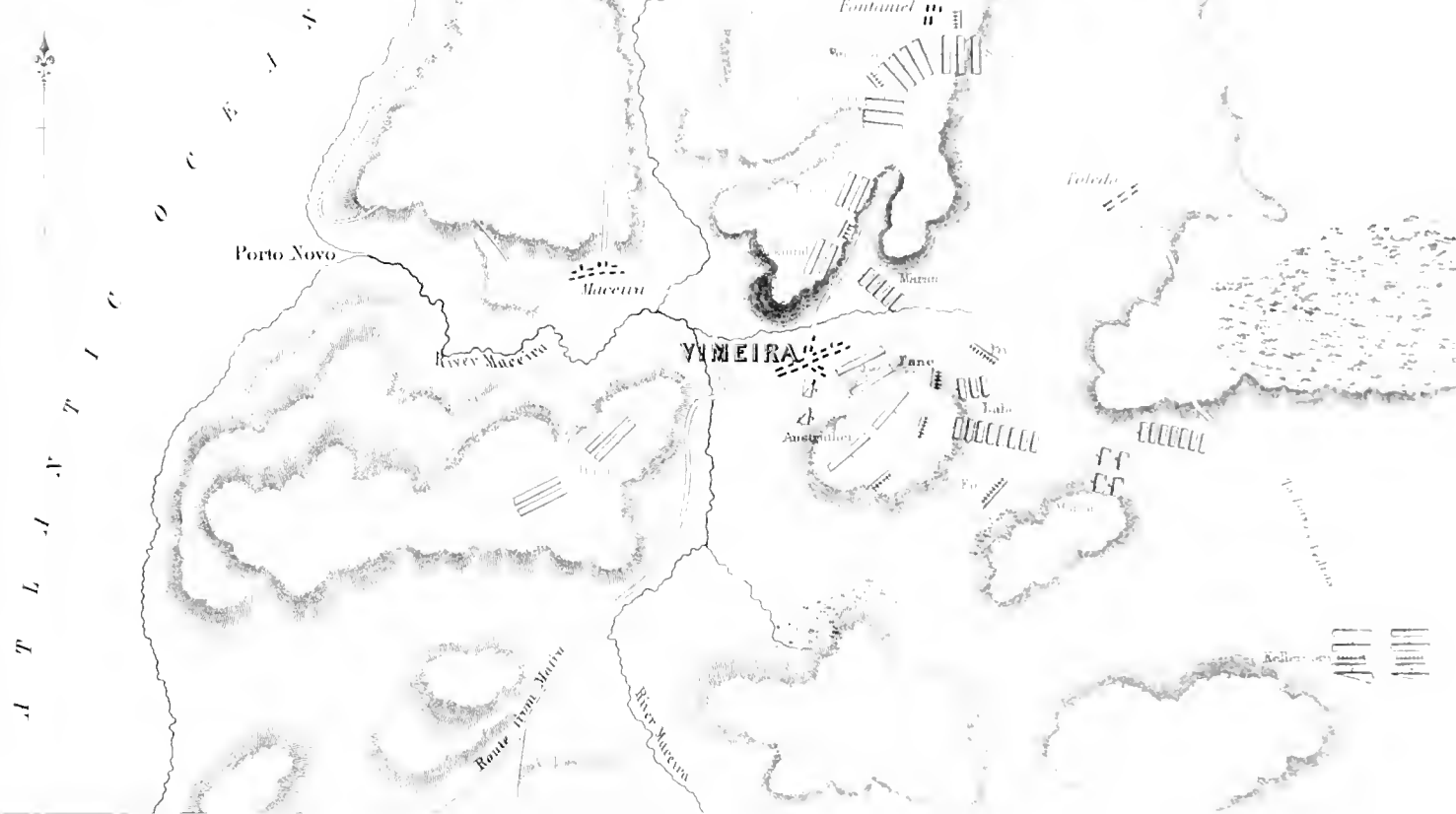
AK 3011 N 10 10 N 10

□ Allies    □ French  
 Cavalry    Infantry    Artillery

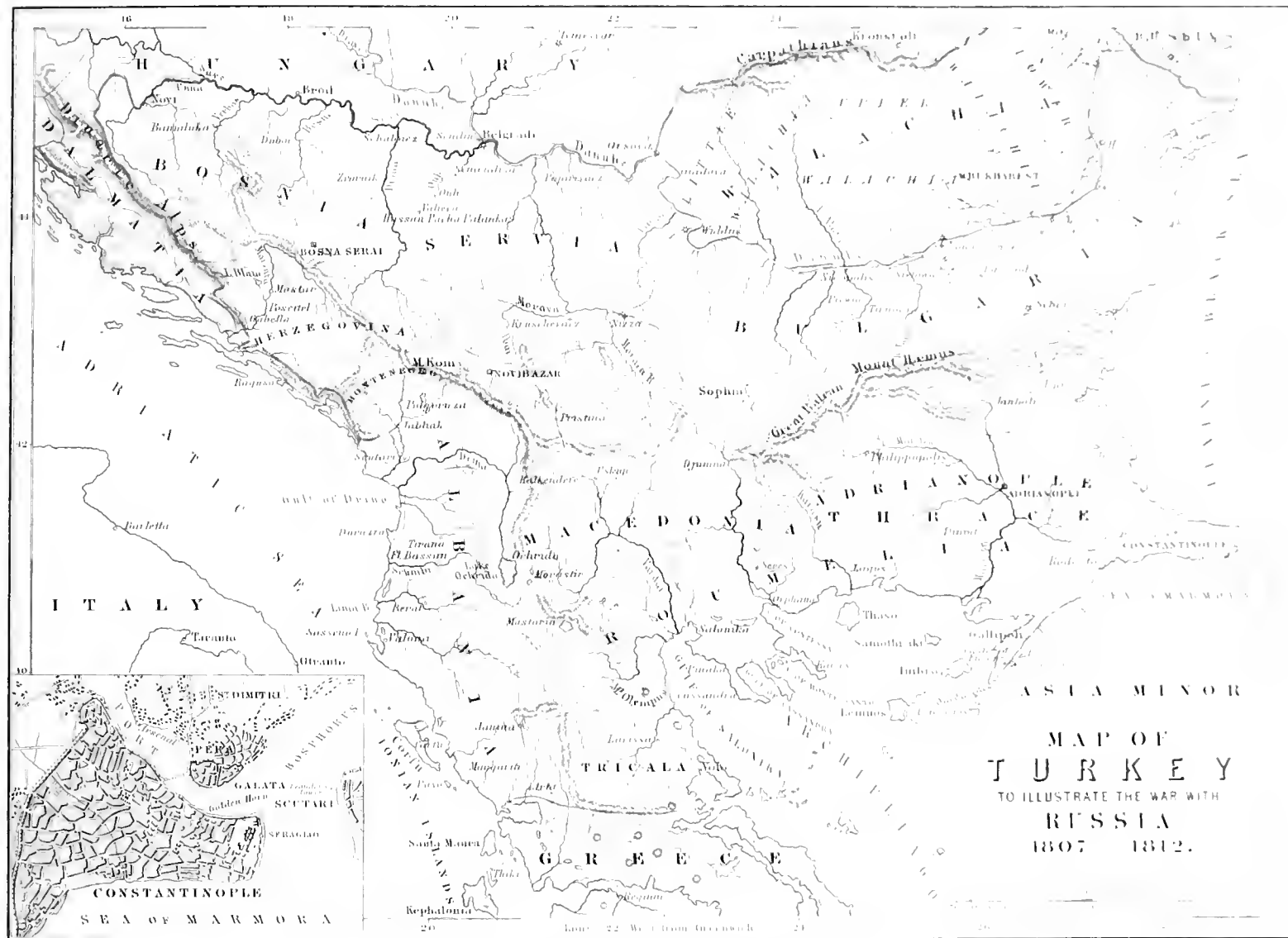
SCALE S

Military Steps 2 1/2 Feet each

1000 500 0 1000 2000  
 English Miles



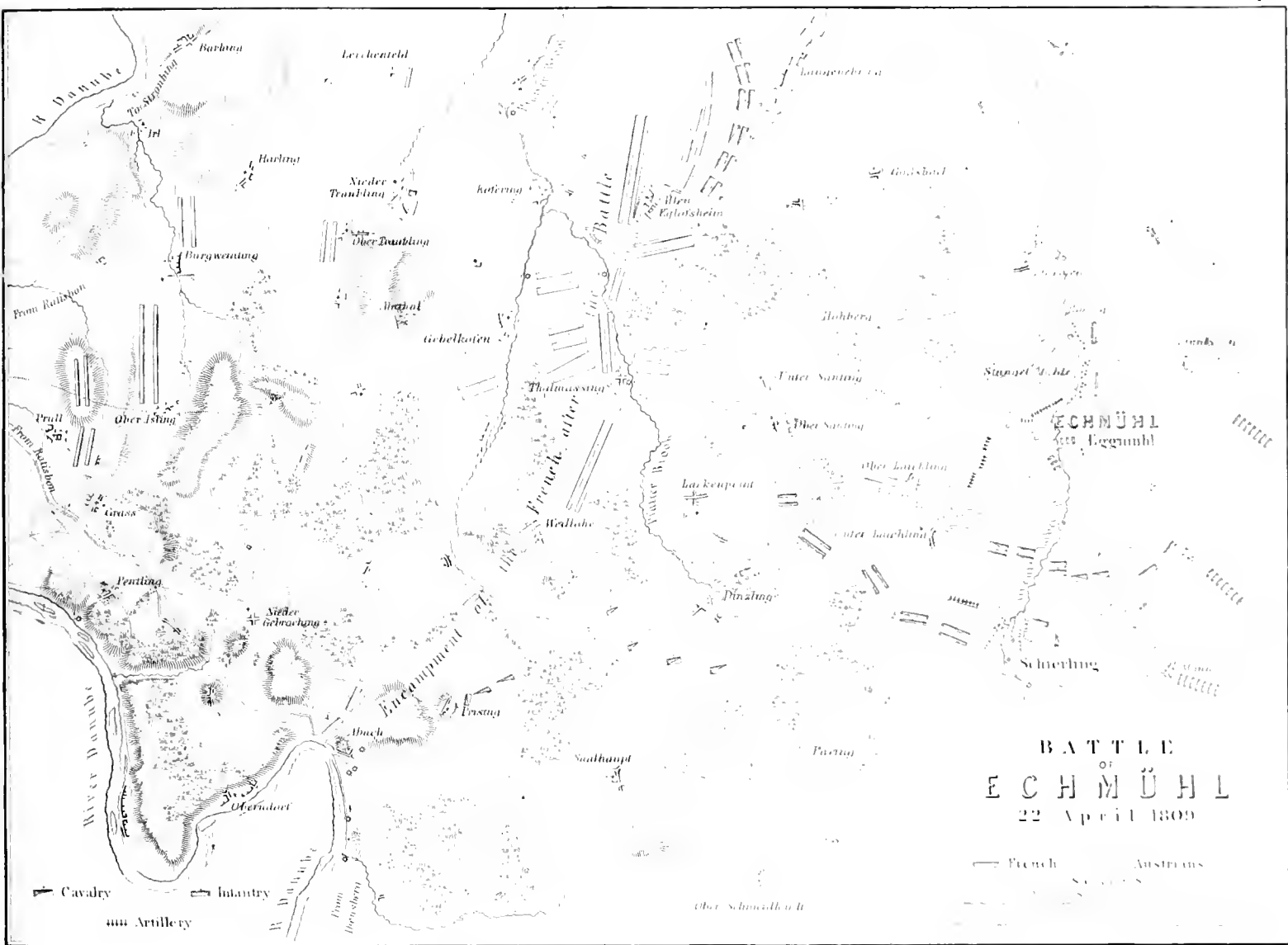






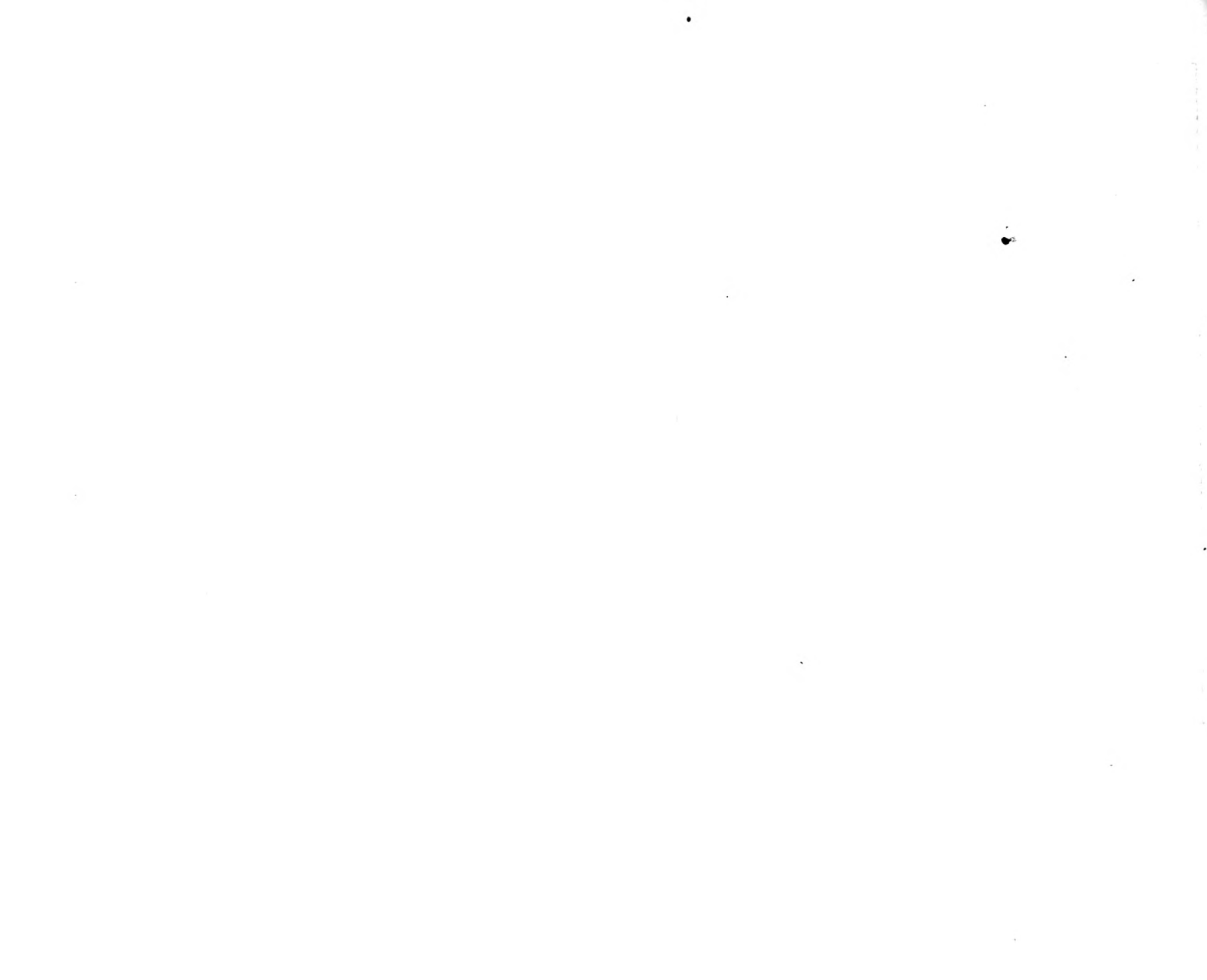




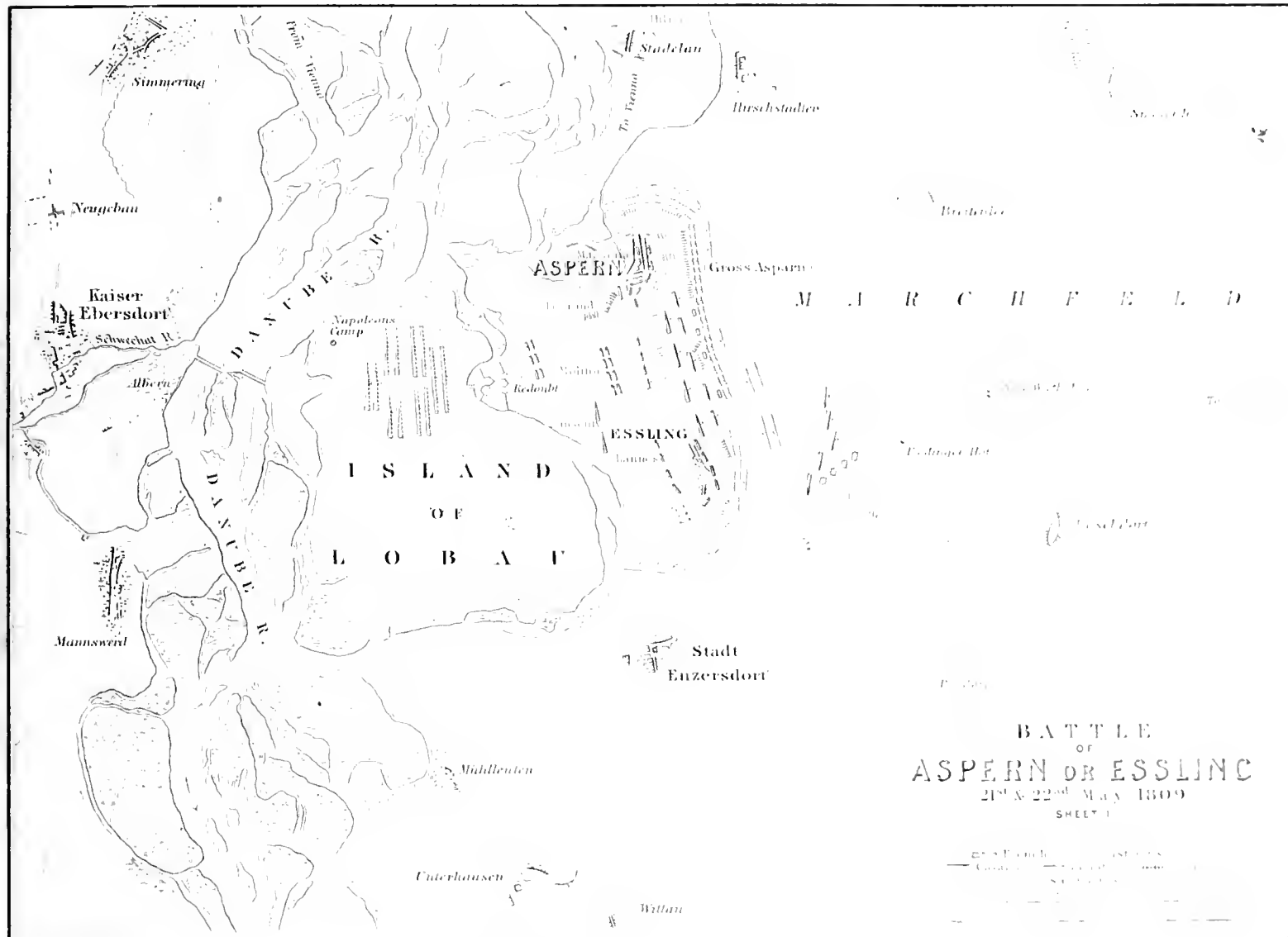


BATTLE  
OF  
ECHMÜHL  
22 April 1809

— French — Austrian



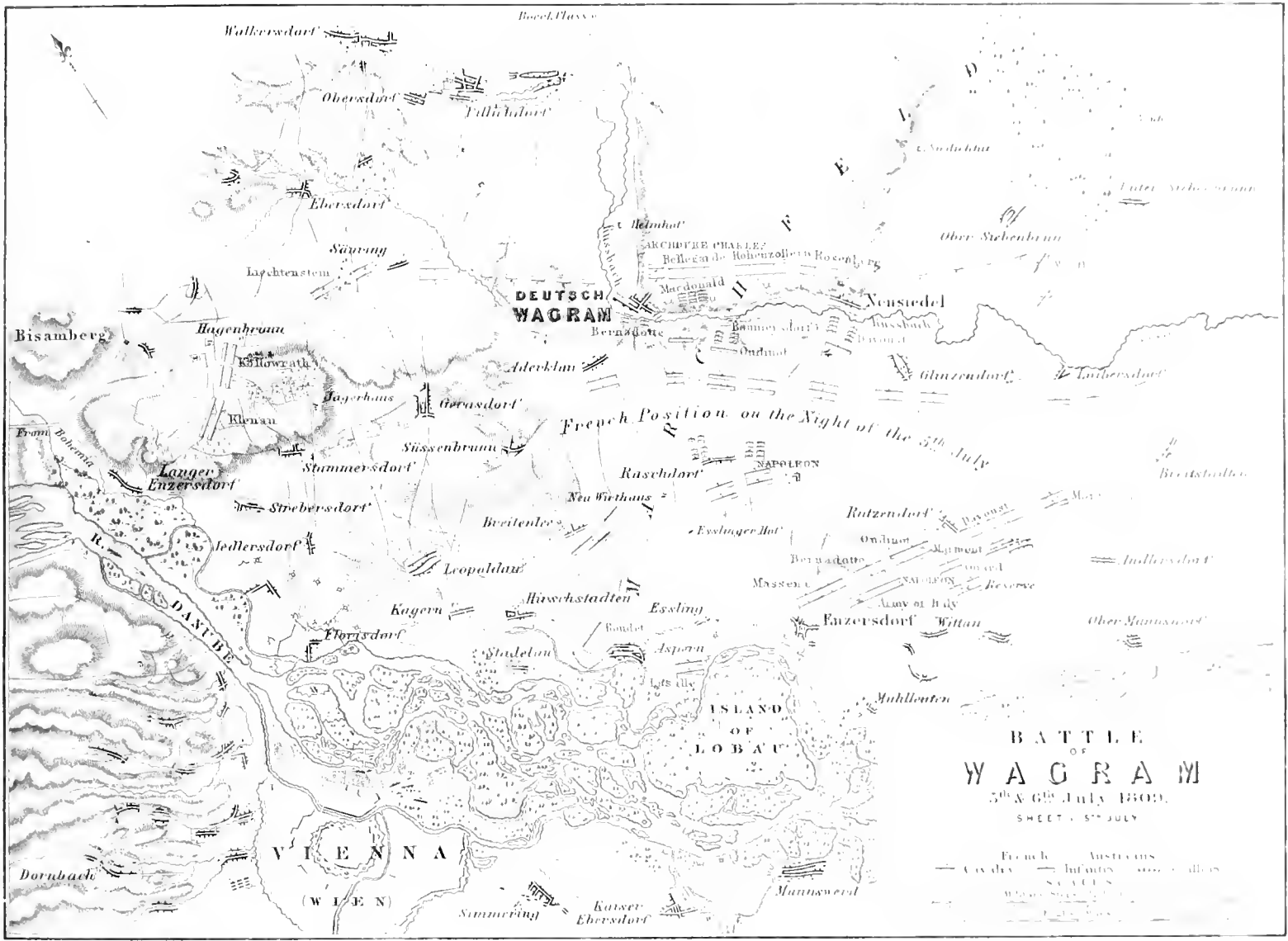




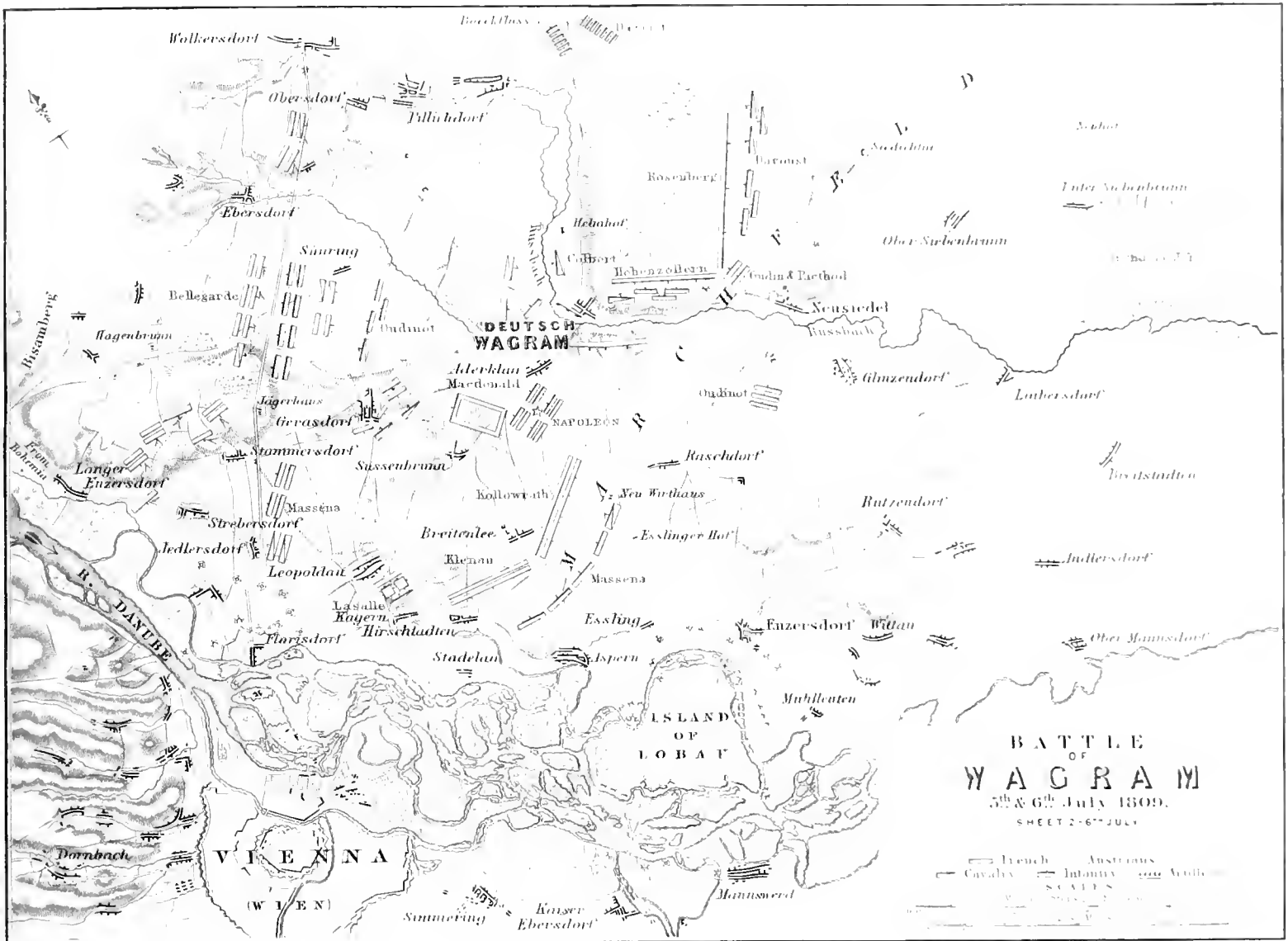






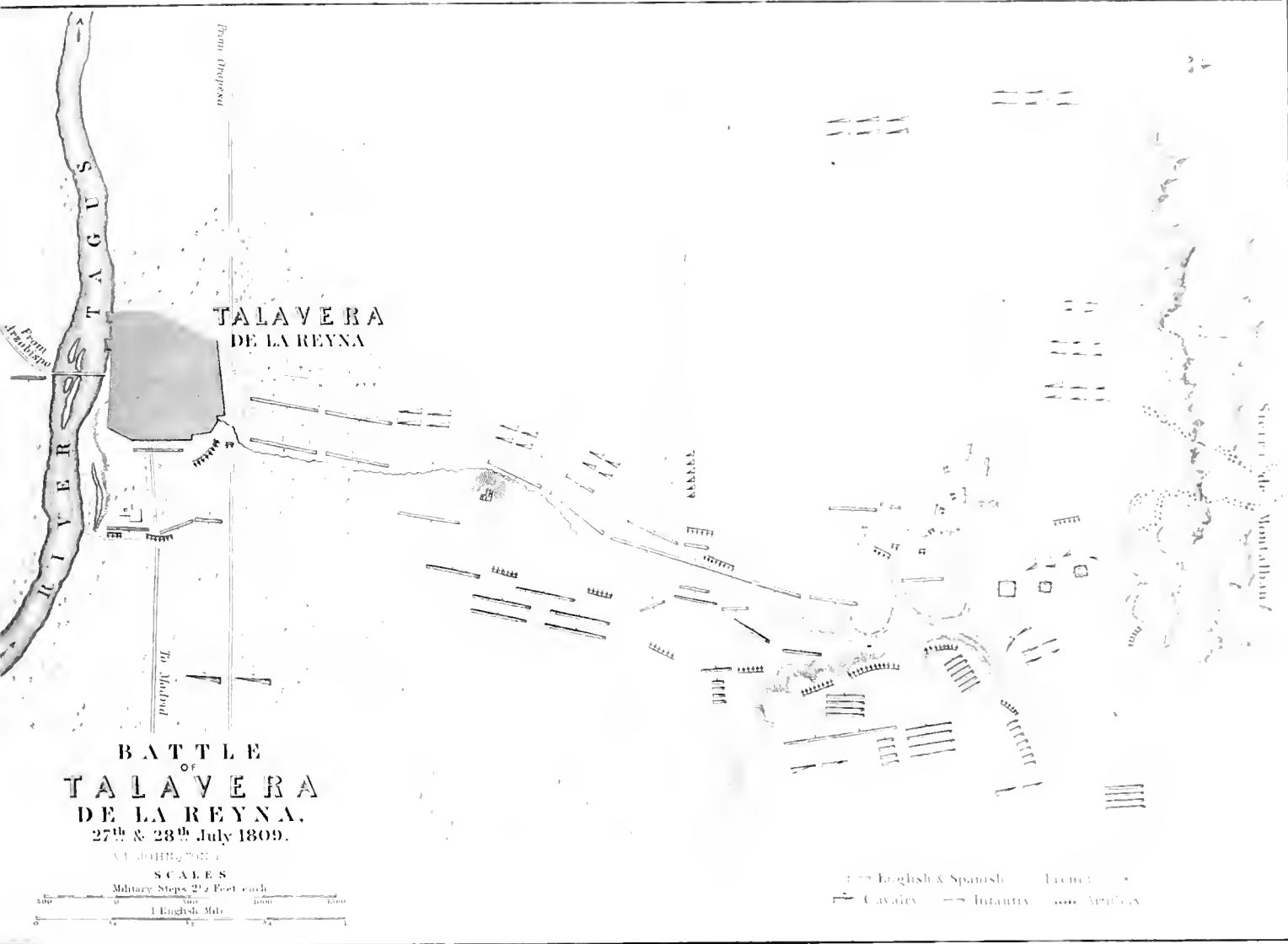














# BATTLE OF OCAÑA 19<sup>th</sup> November 1809.

French Cavalry    Spanish Infantry    Artillery

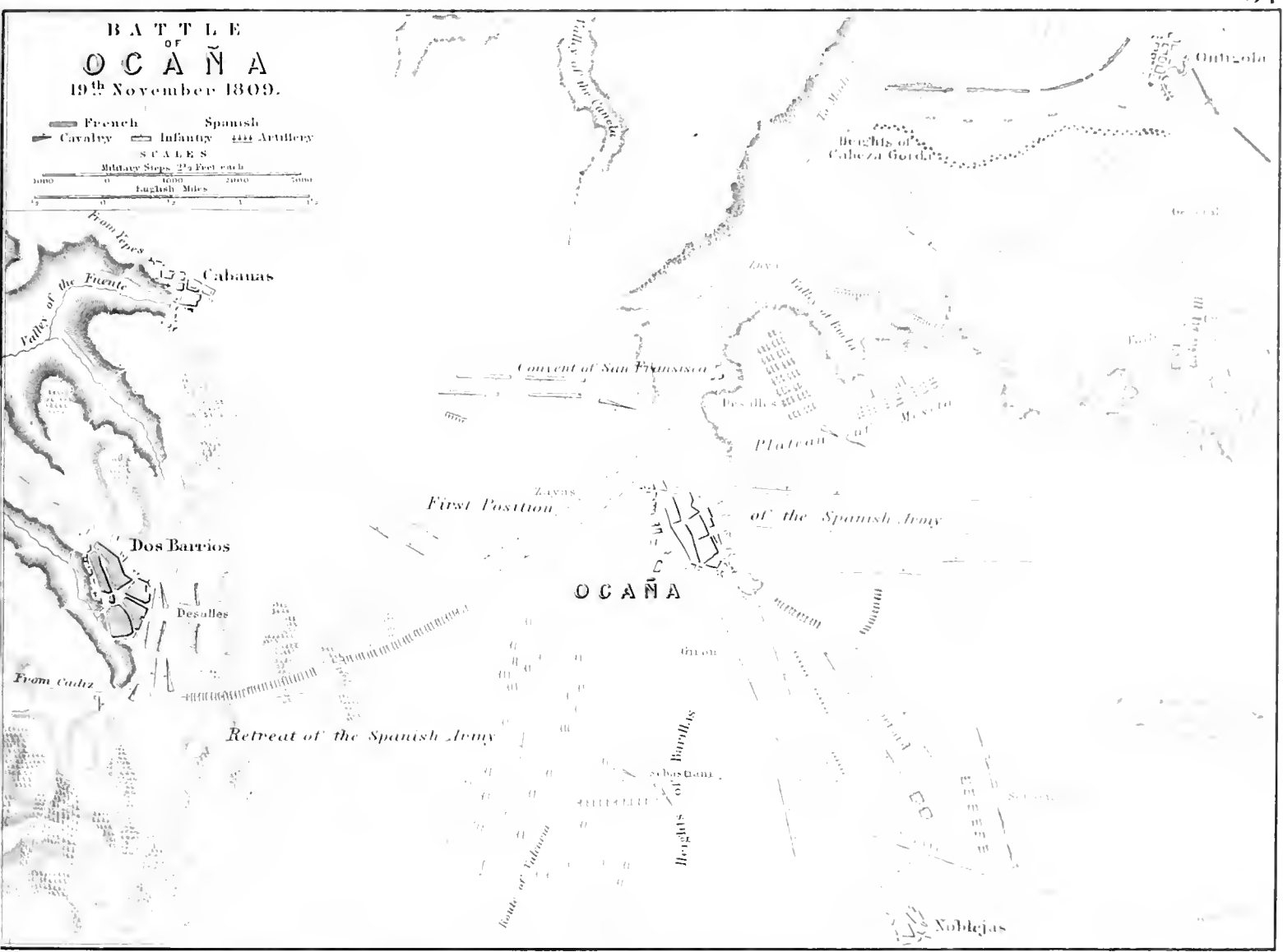
SCALE S

Military Steps 2½ Feet each

1000 0 1000 2000 3000

English Miles

1 2 3





# SIEGE OF GERONA

By the French Army of Catalonia  
From May to October 1809.

1:100,000

SCALE

1/4 1/2 3/4 1 1 1/2 2 Miles

French Batteries coloured Blue





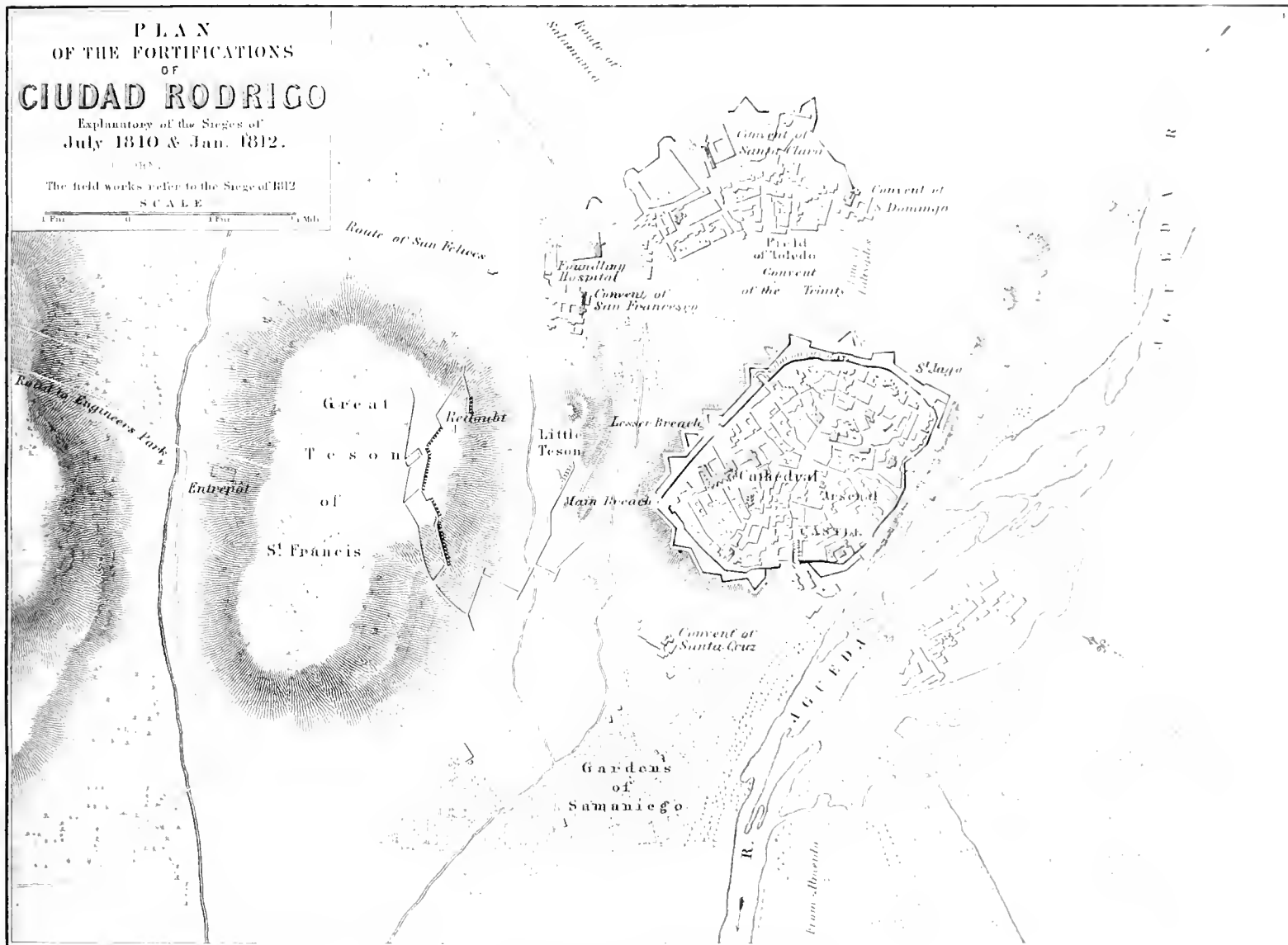
PLAN  
OF THE FORTIFICATIONS  
OF  
**CIUDAD RODRIGO**

Explanatory of the Sieges of  
July 1810 & Jan. 1812.

The field works refer to the Siege of 1812

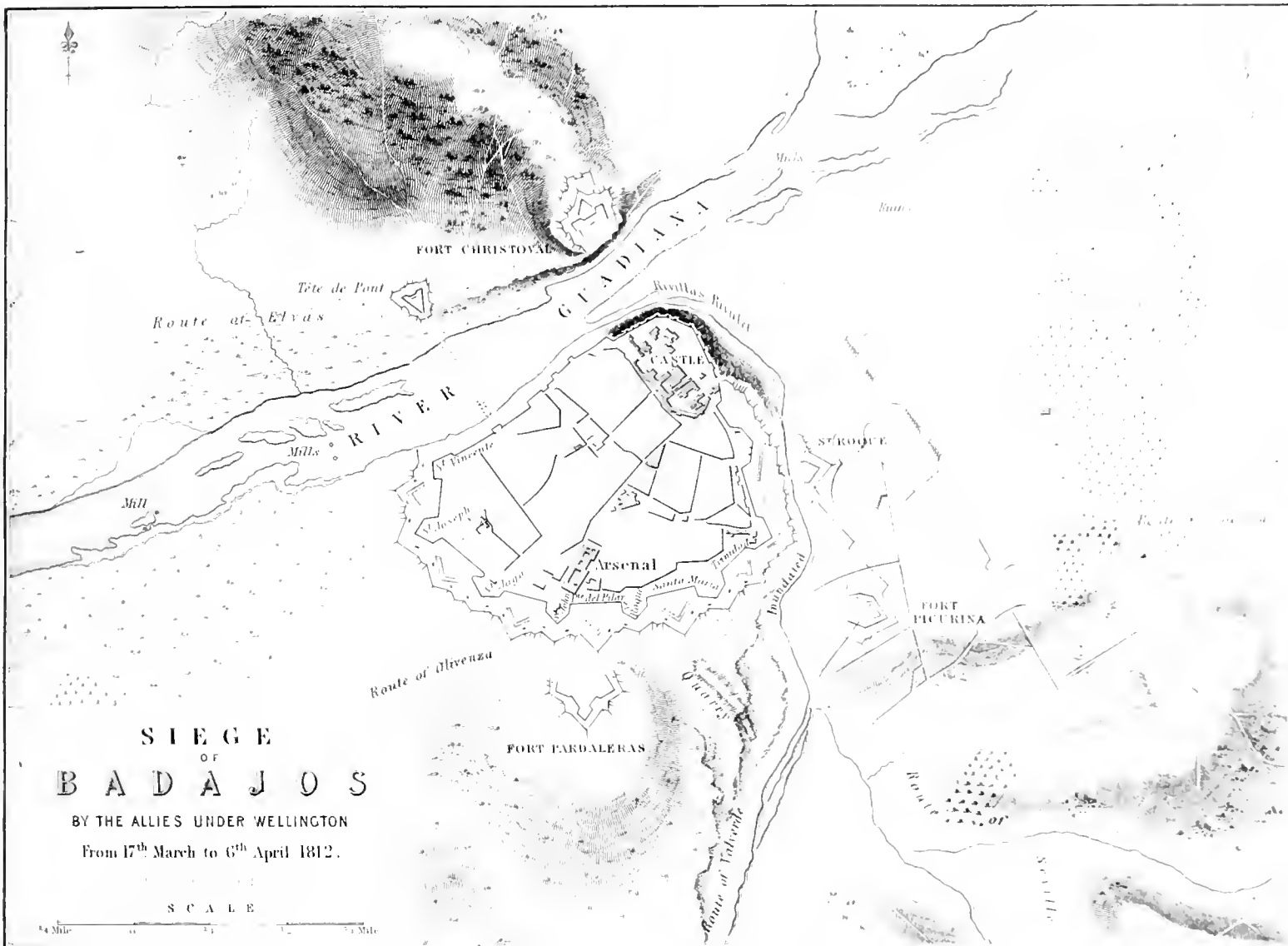
SCALE

1 Fm 0 1 Fm 2 Mls







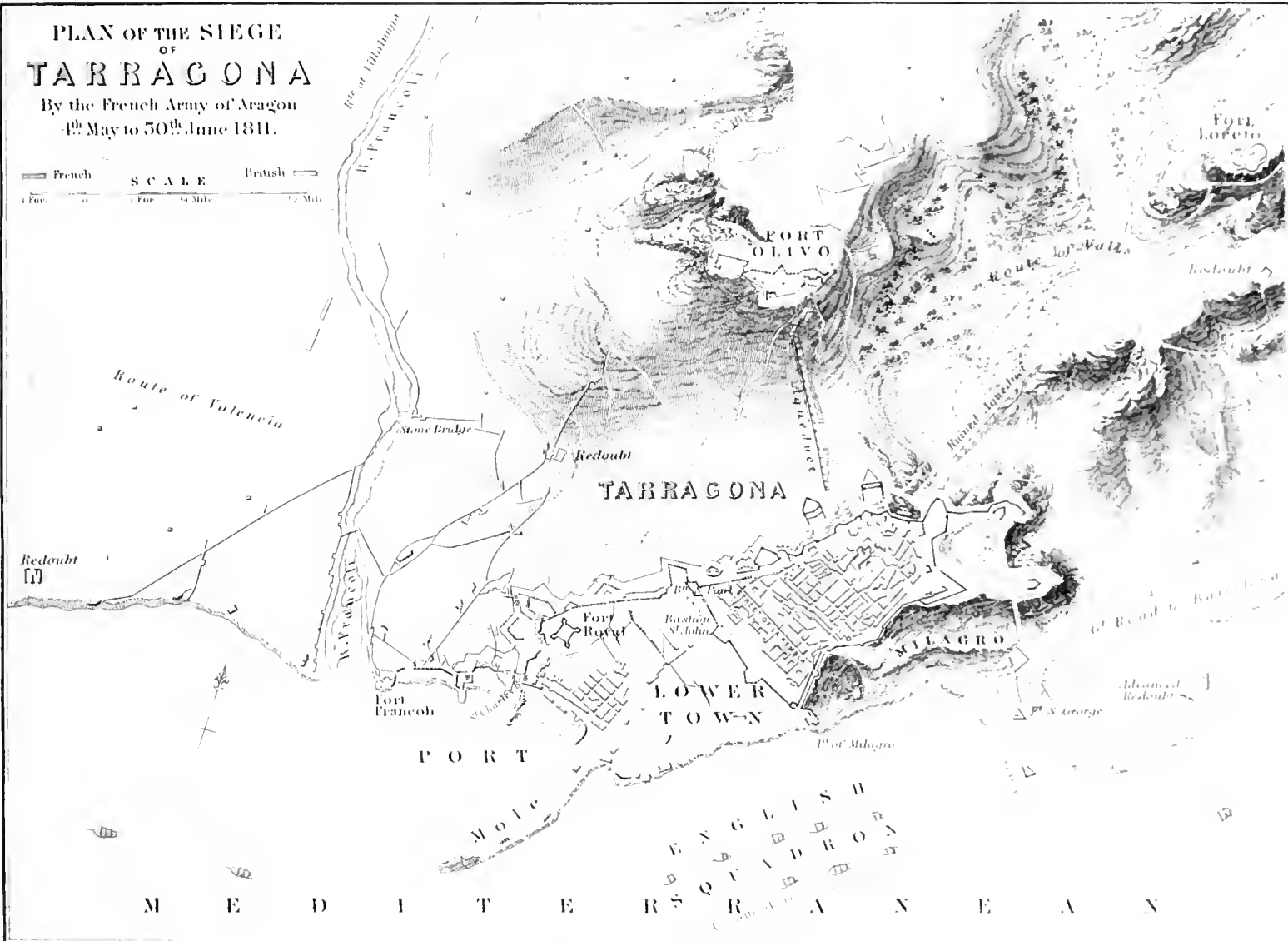




# PLAN OF THE SIEGE OF TARRAGONA

By the French Army of Aragon  
4<sup>th</sup> May to 50<sup>th</sup> June 1811.

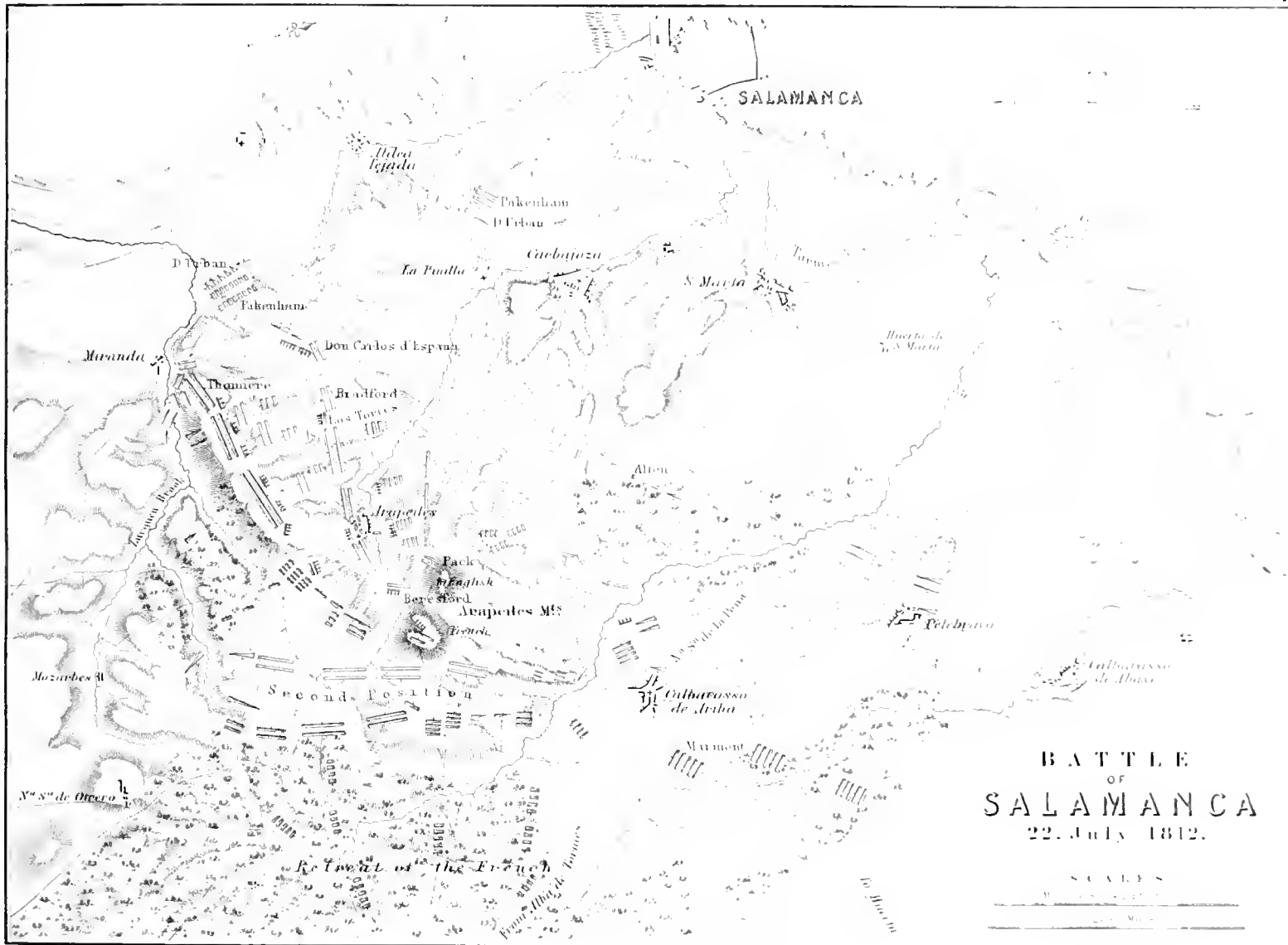
French ——— British ———  
SCALE  
1 Fur. 1/2 Mile 1/4 Mile 1/8 Mile





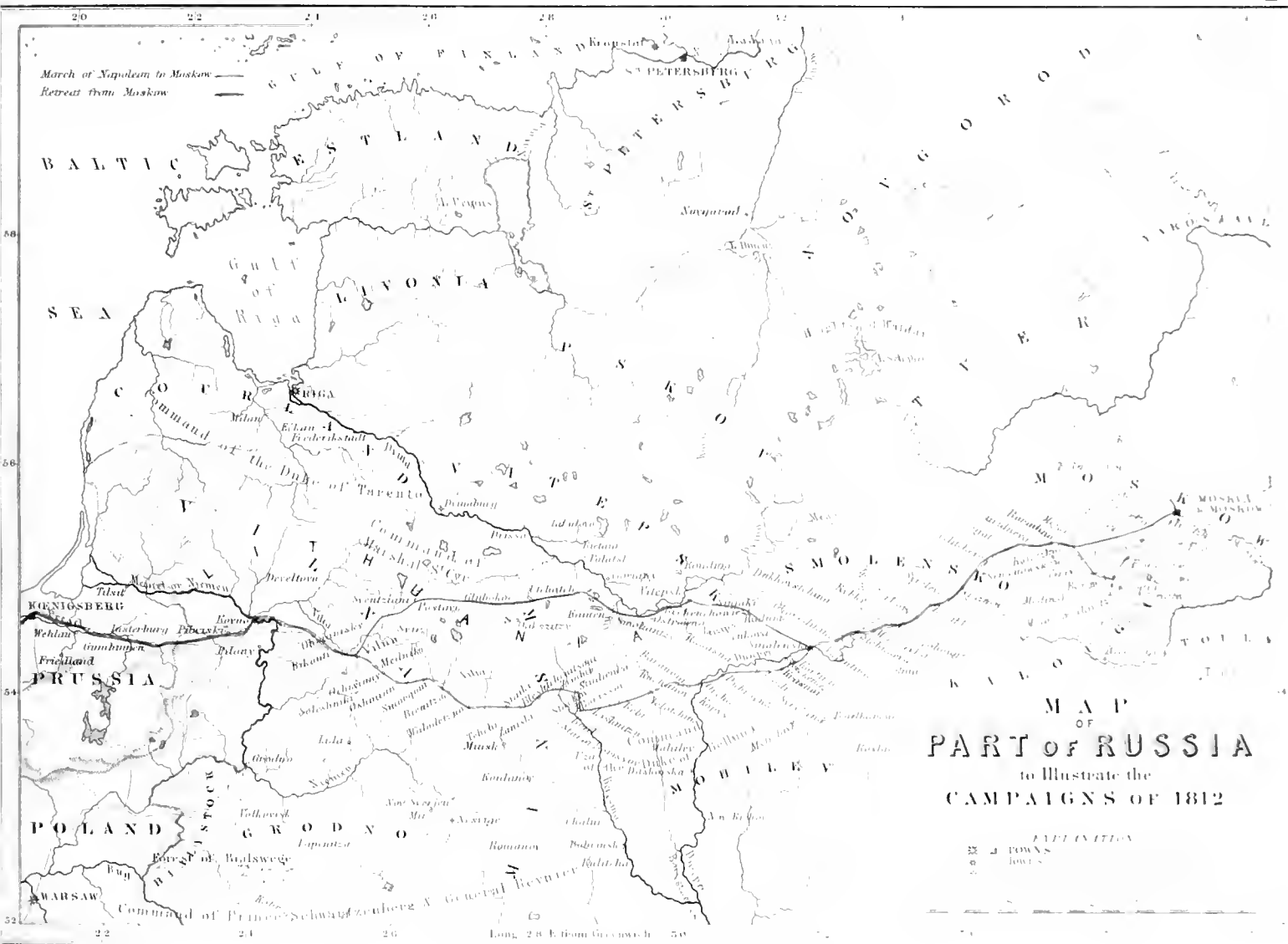


















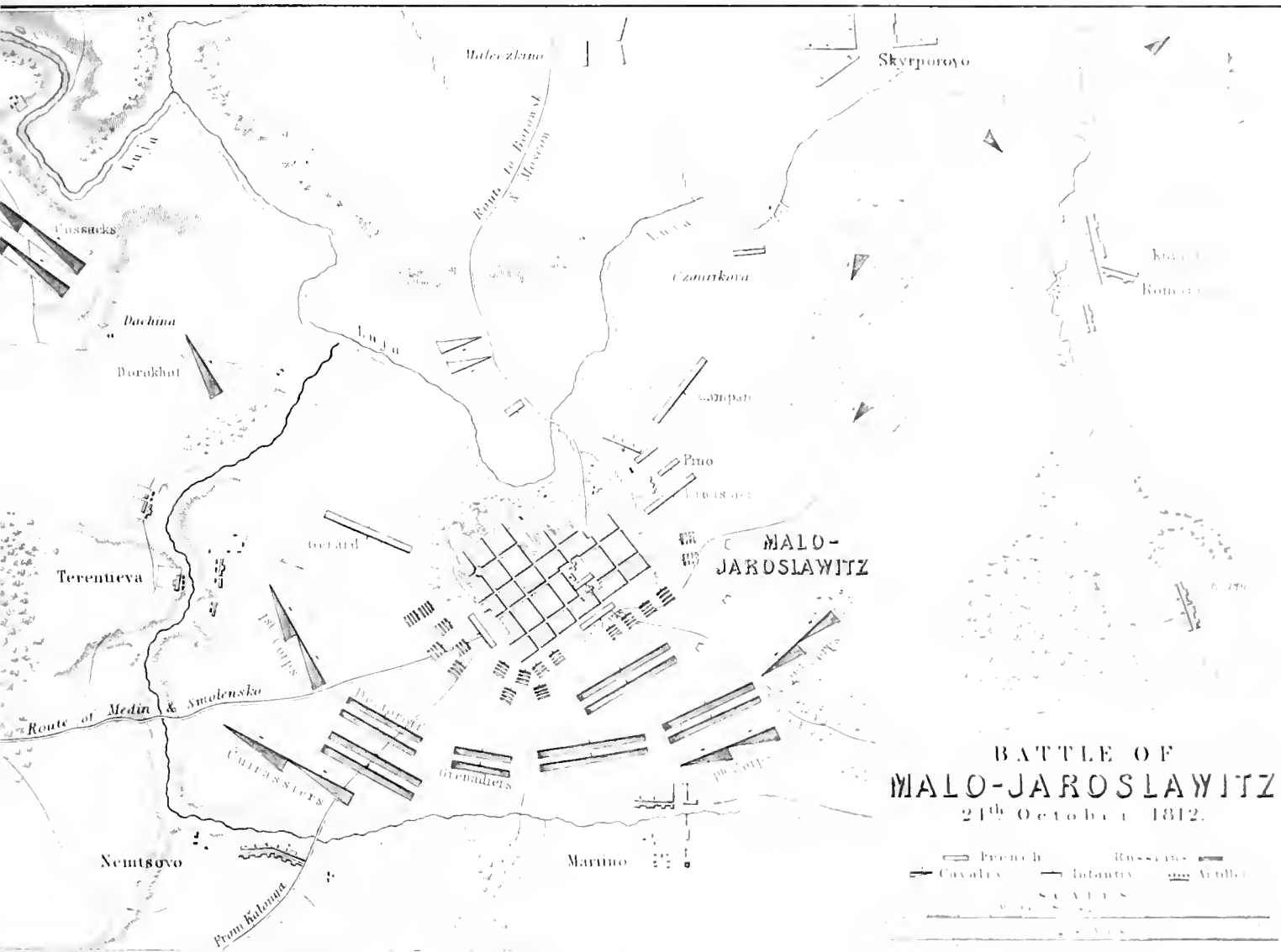






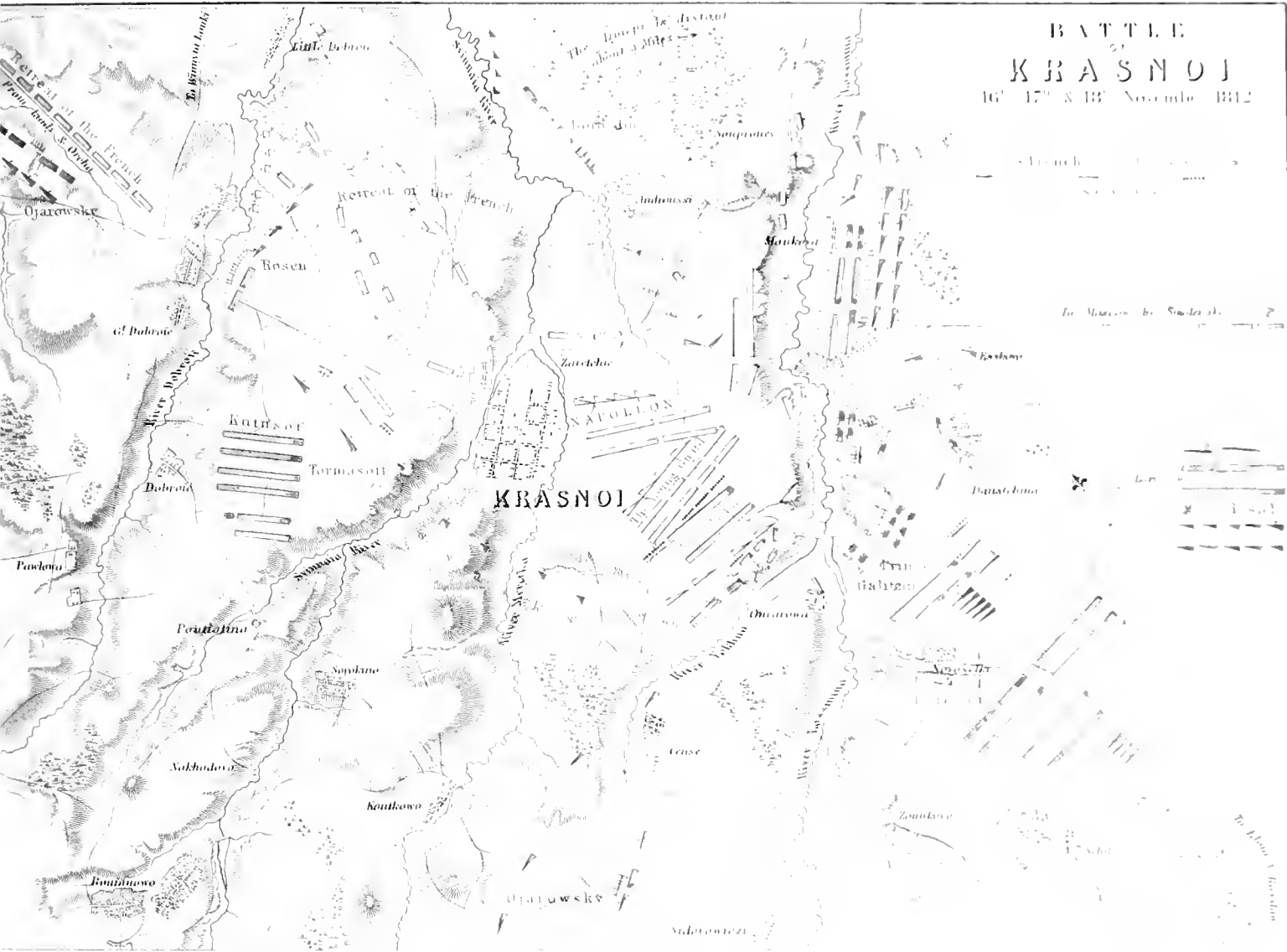




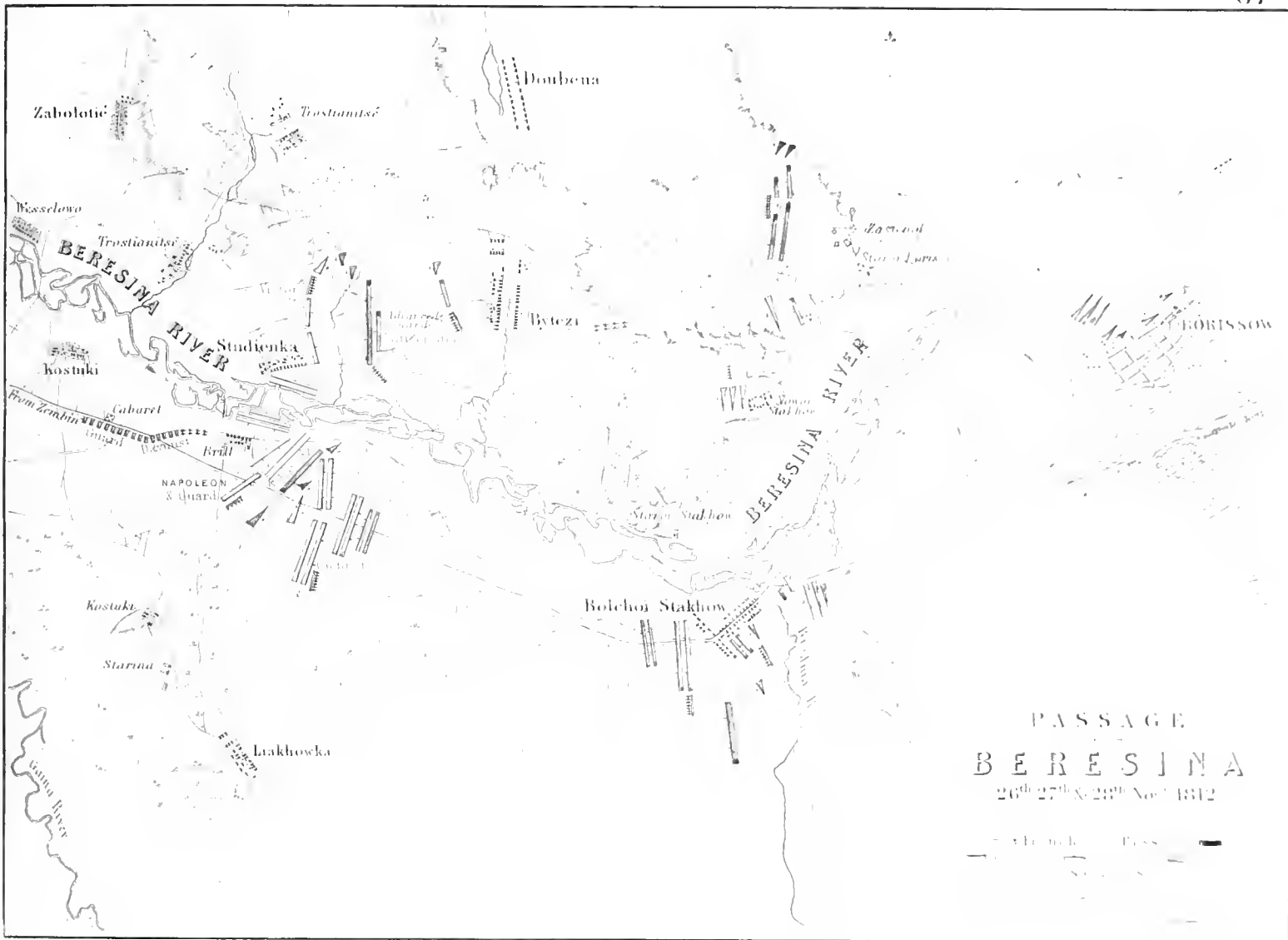




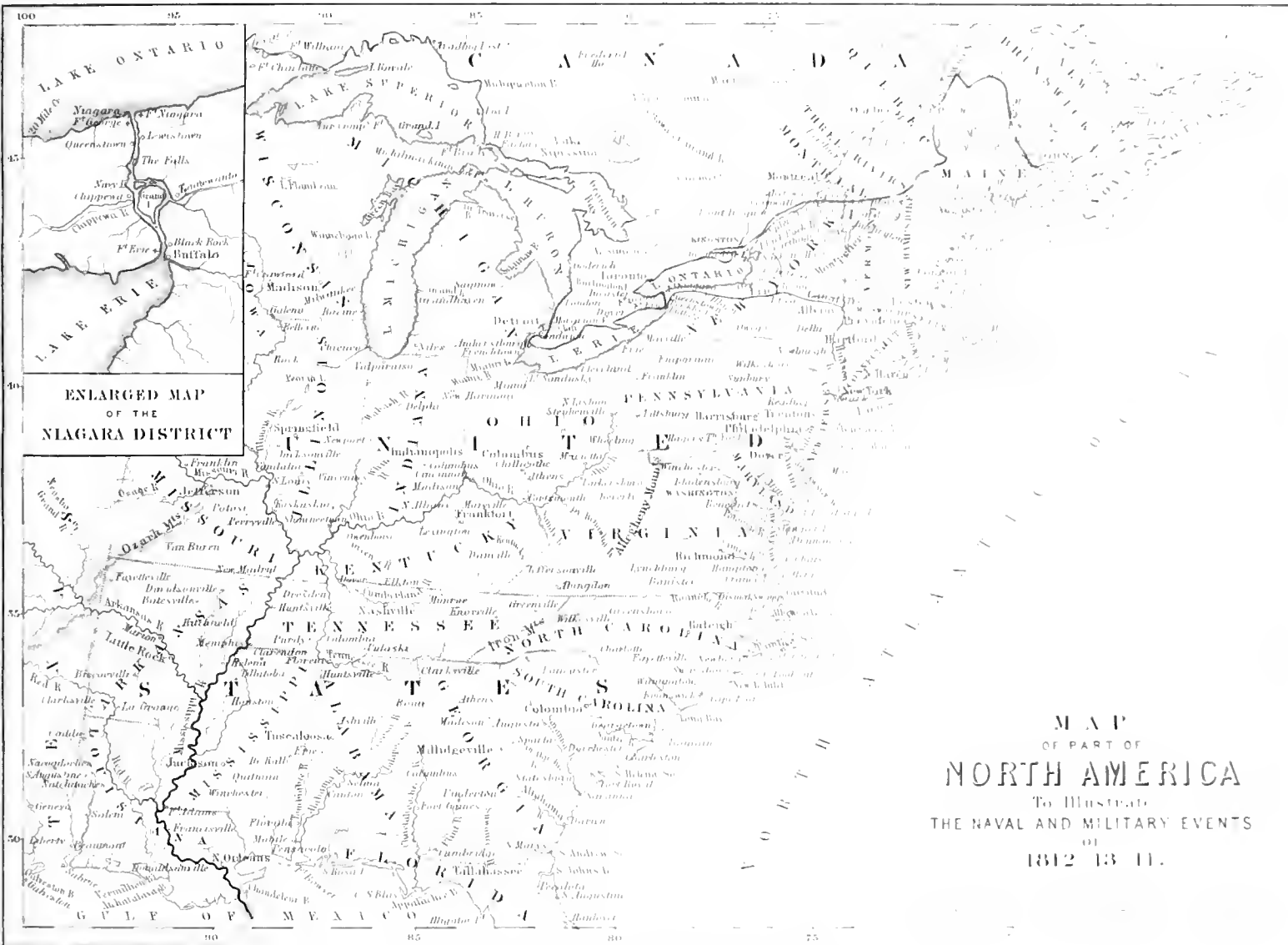
BATTLE  
OF  
KRA SN O J

16<sup>1</sup> 17<sup>11</sup> N 113° November 1942













# BATTLE OF LUTZEN

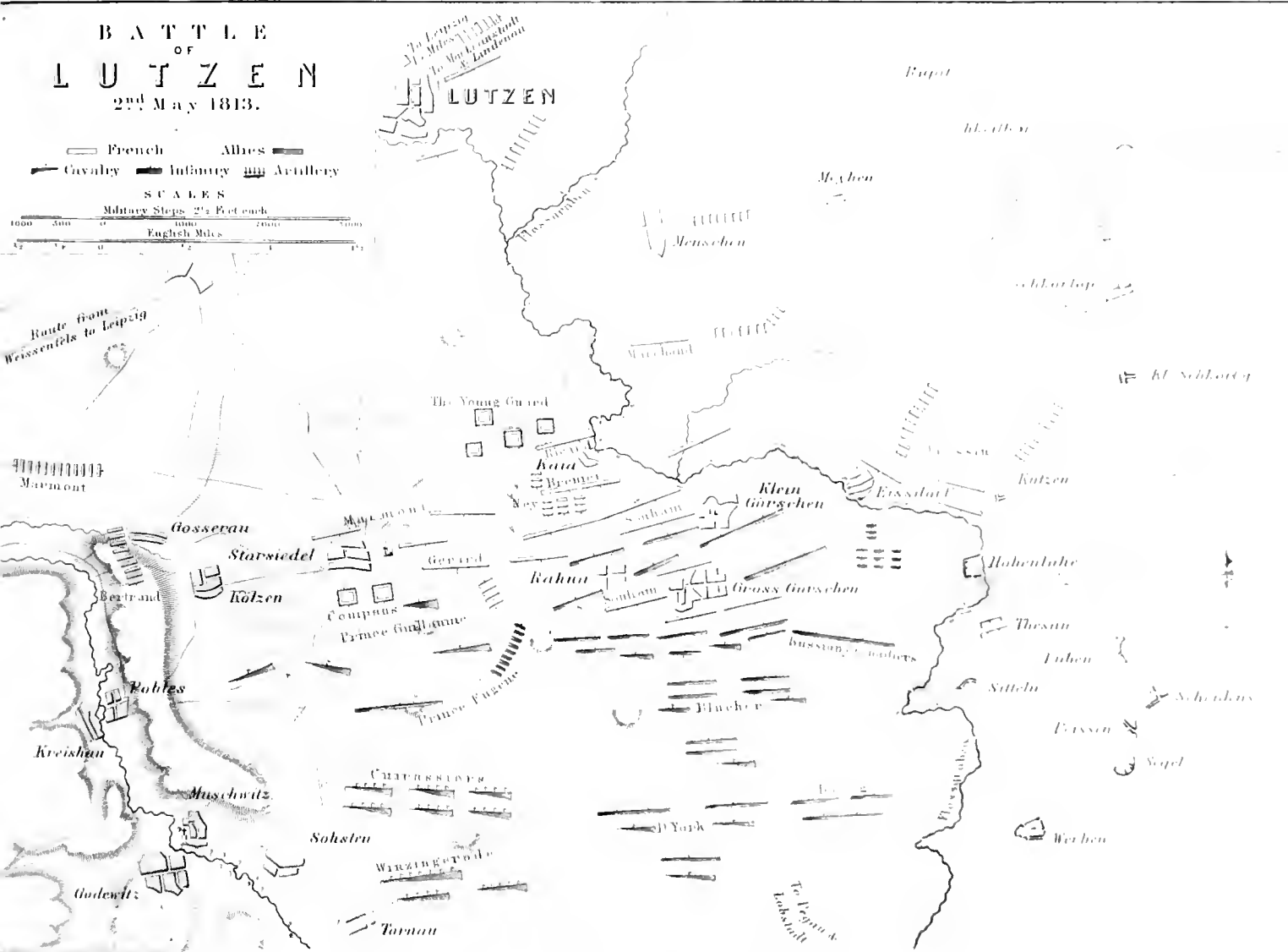
2<sup>nd</sup> May 1813.

French ——— Allies ———  
Cavalry ——— Infantry ——— Artillery ———

SCALES

Military Steps, 2 1/2 Feet each

1000 2000 3000 4000 5000  
English Miles



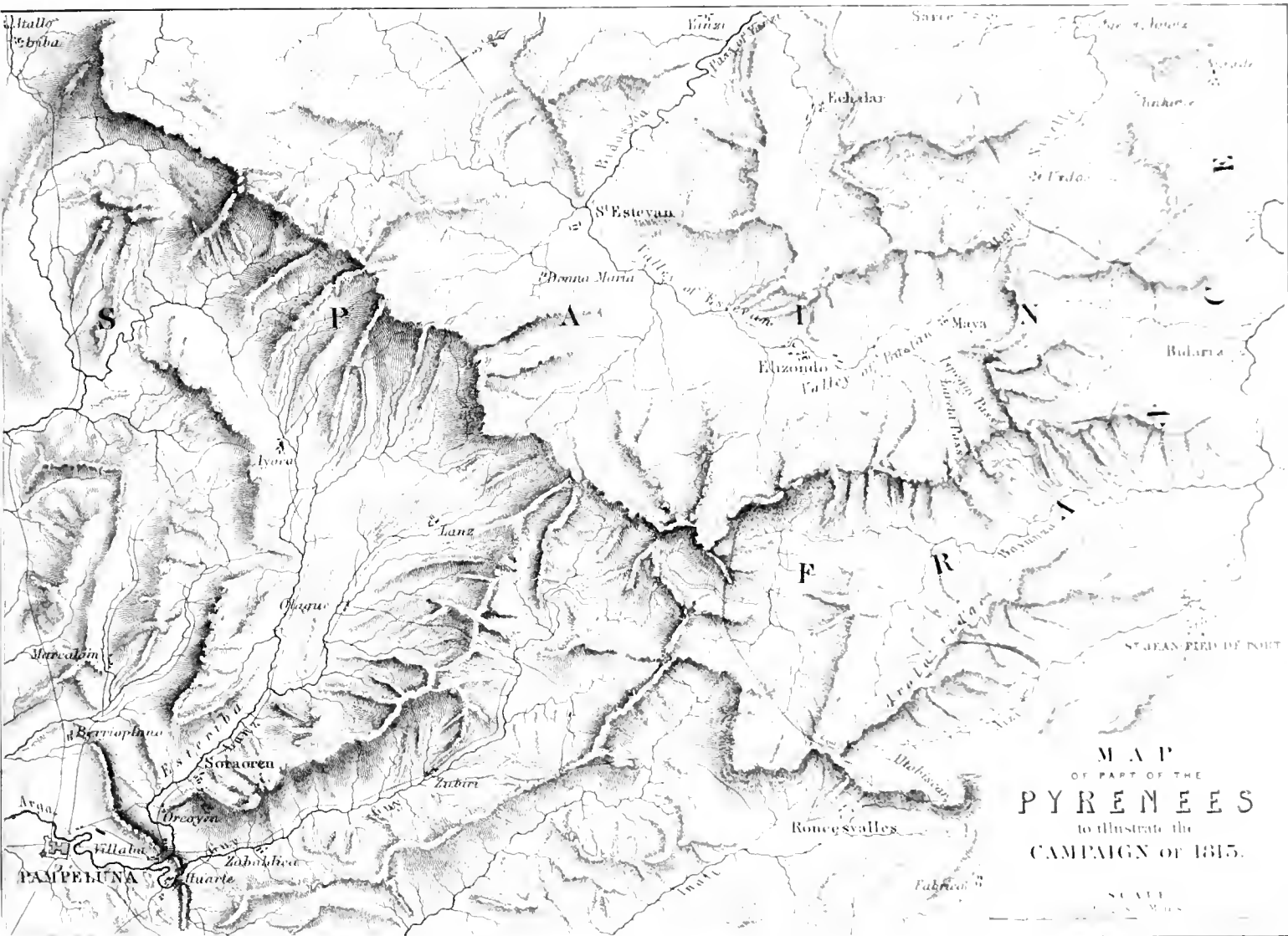






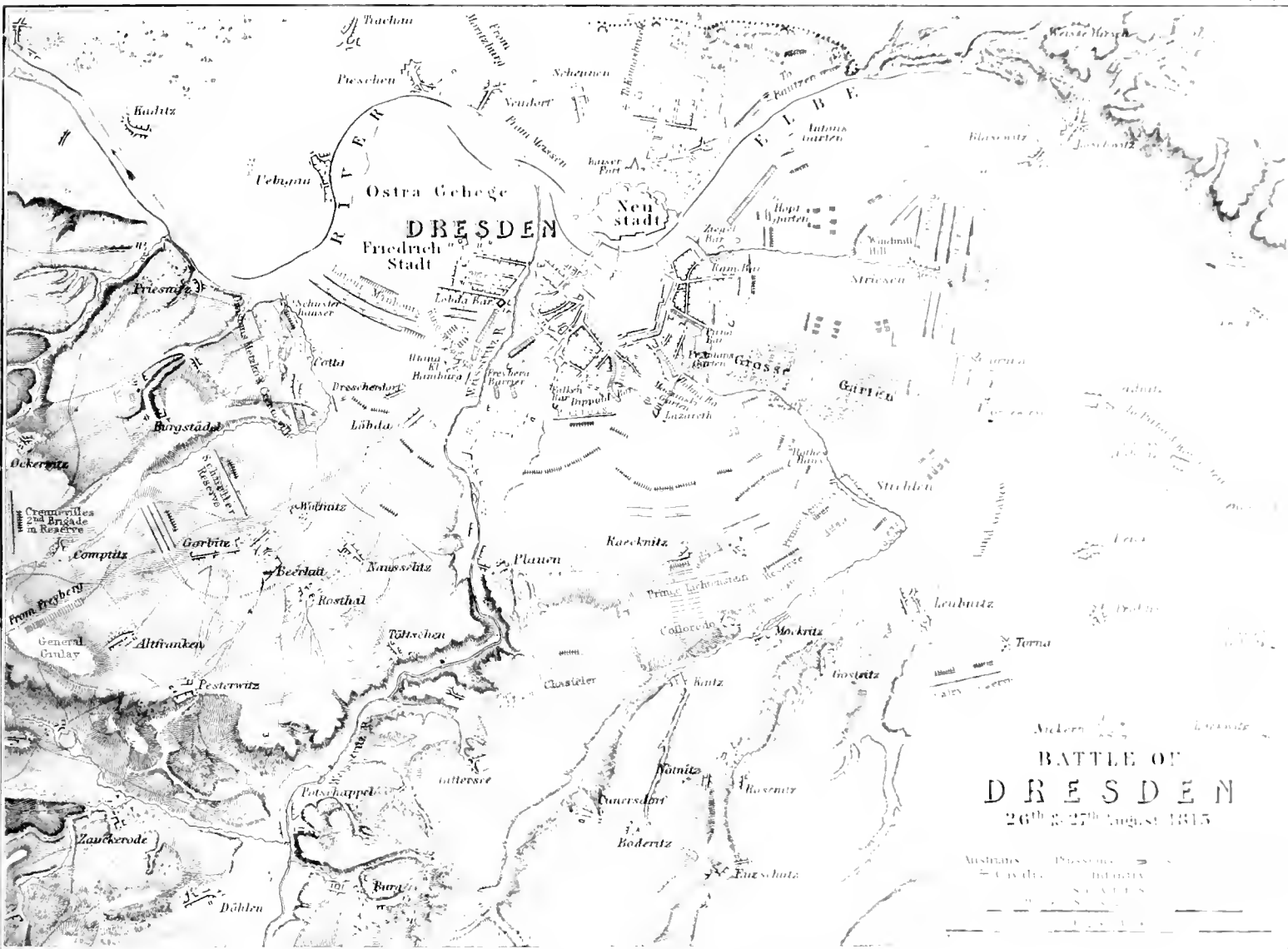










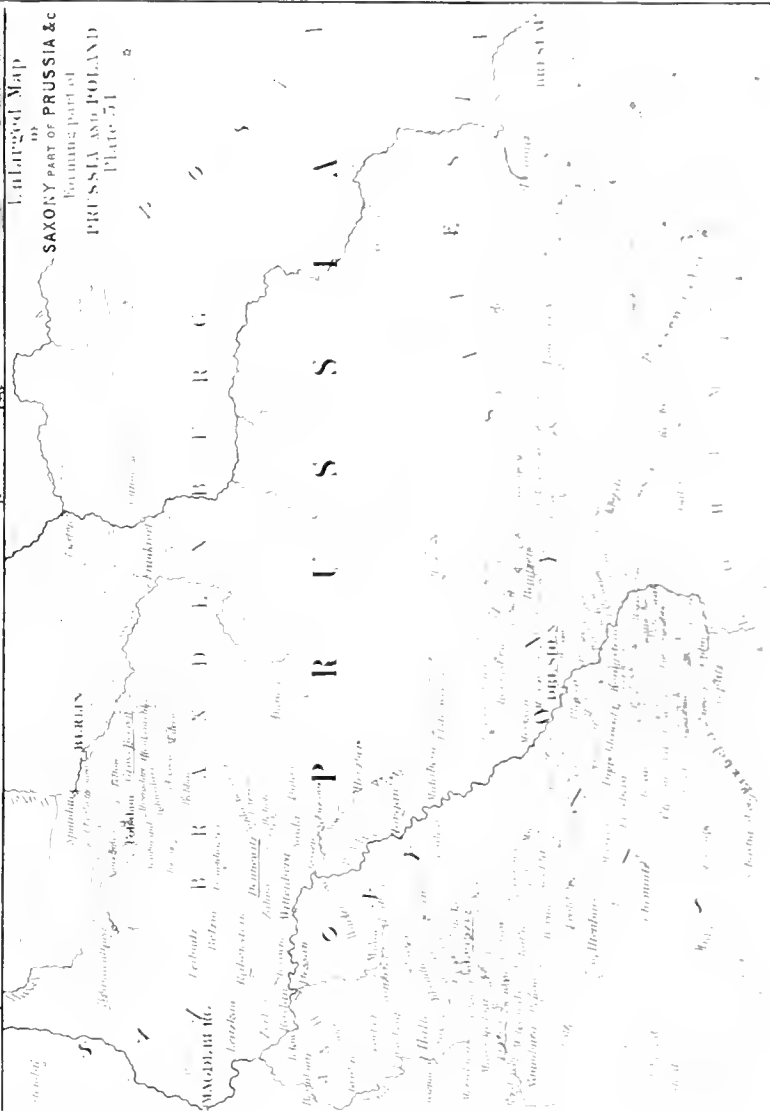
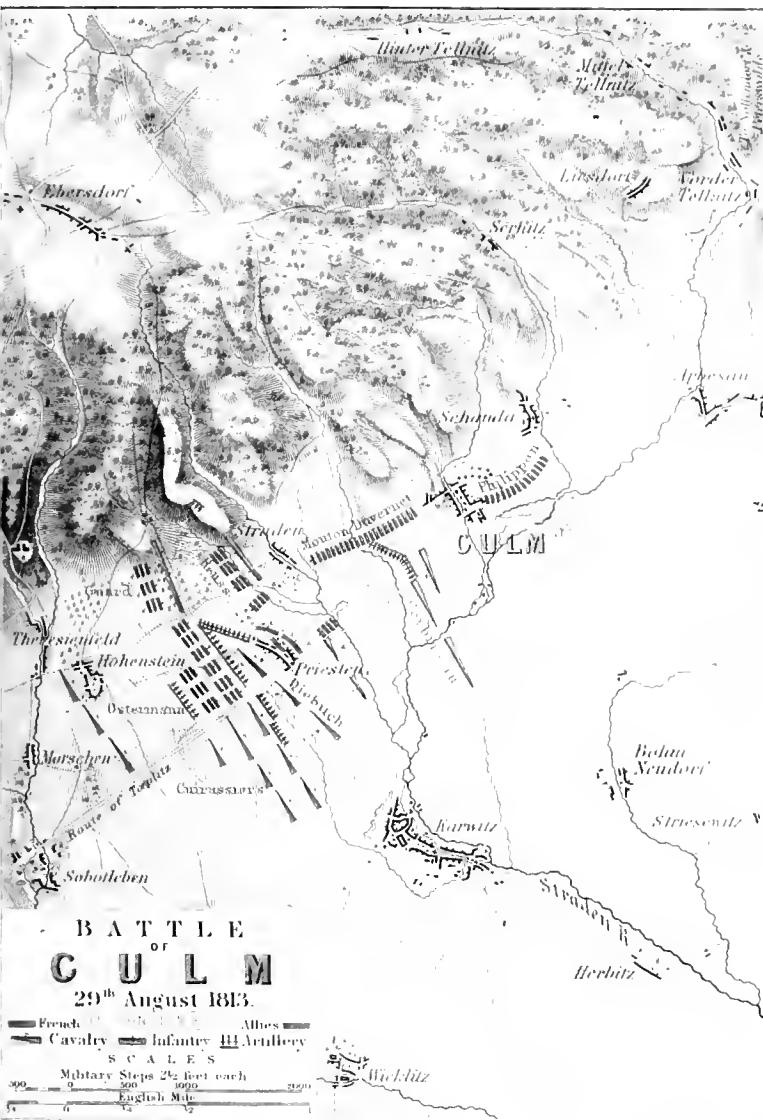




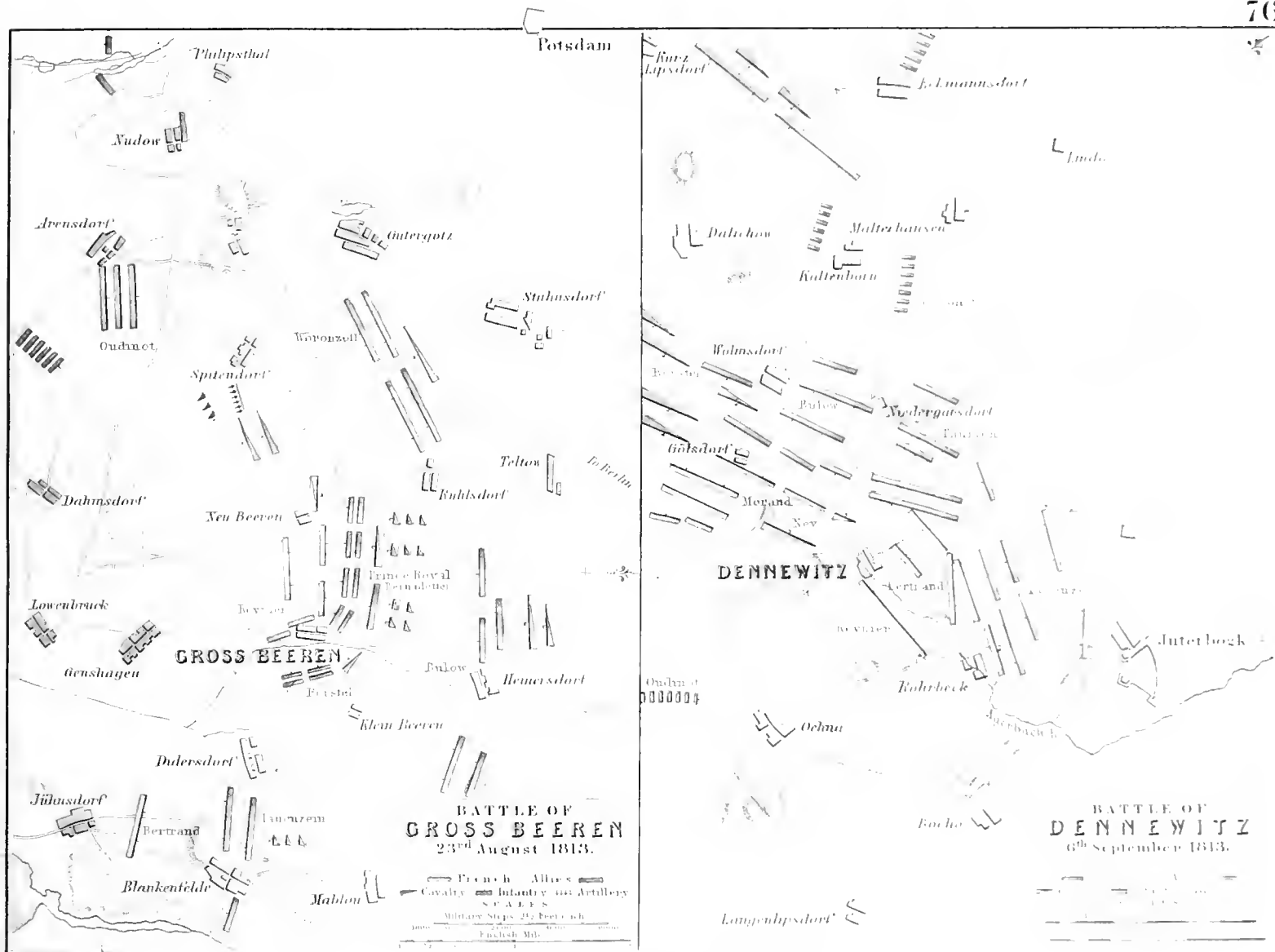
# BATTLE KATZBACH 26<sup>th</sup> August 1813

































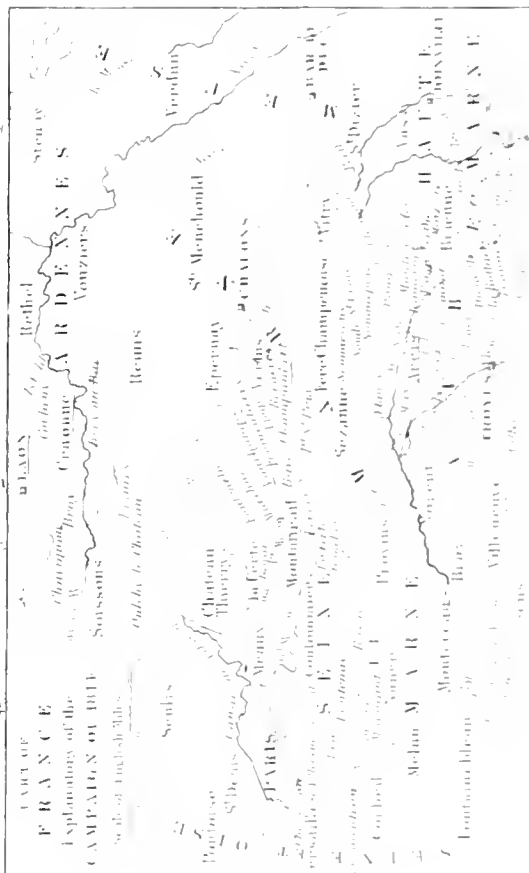
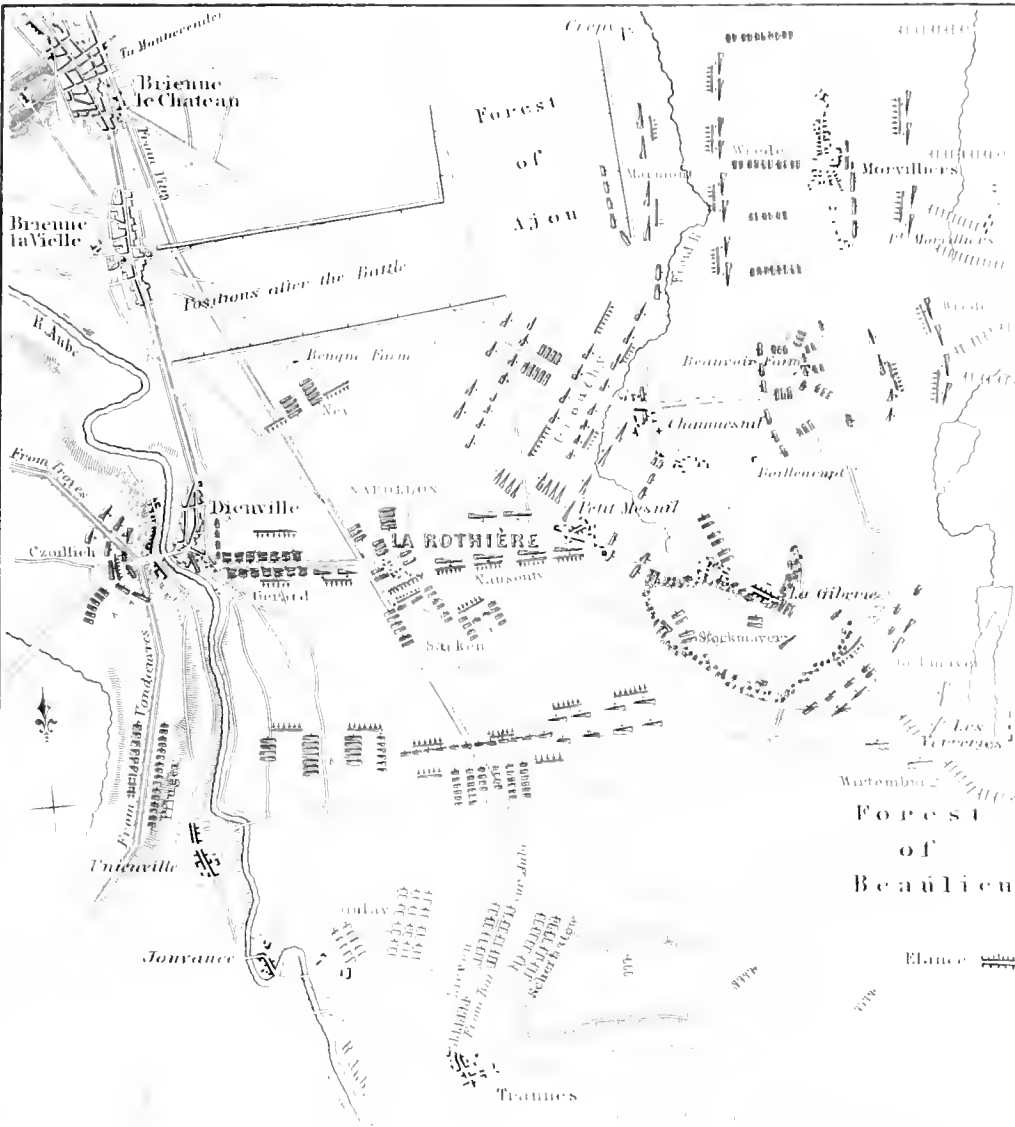




# BATTLE OF LA ROTHIERE

1<sup>st</sup> February 1814

French Cavalry  
Cavalry  
Infantry  
Artillery

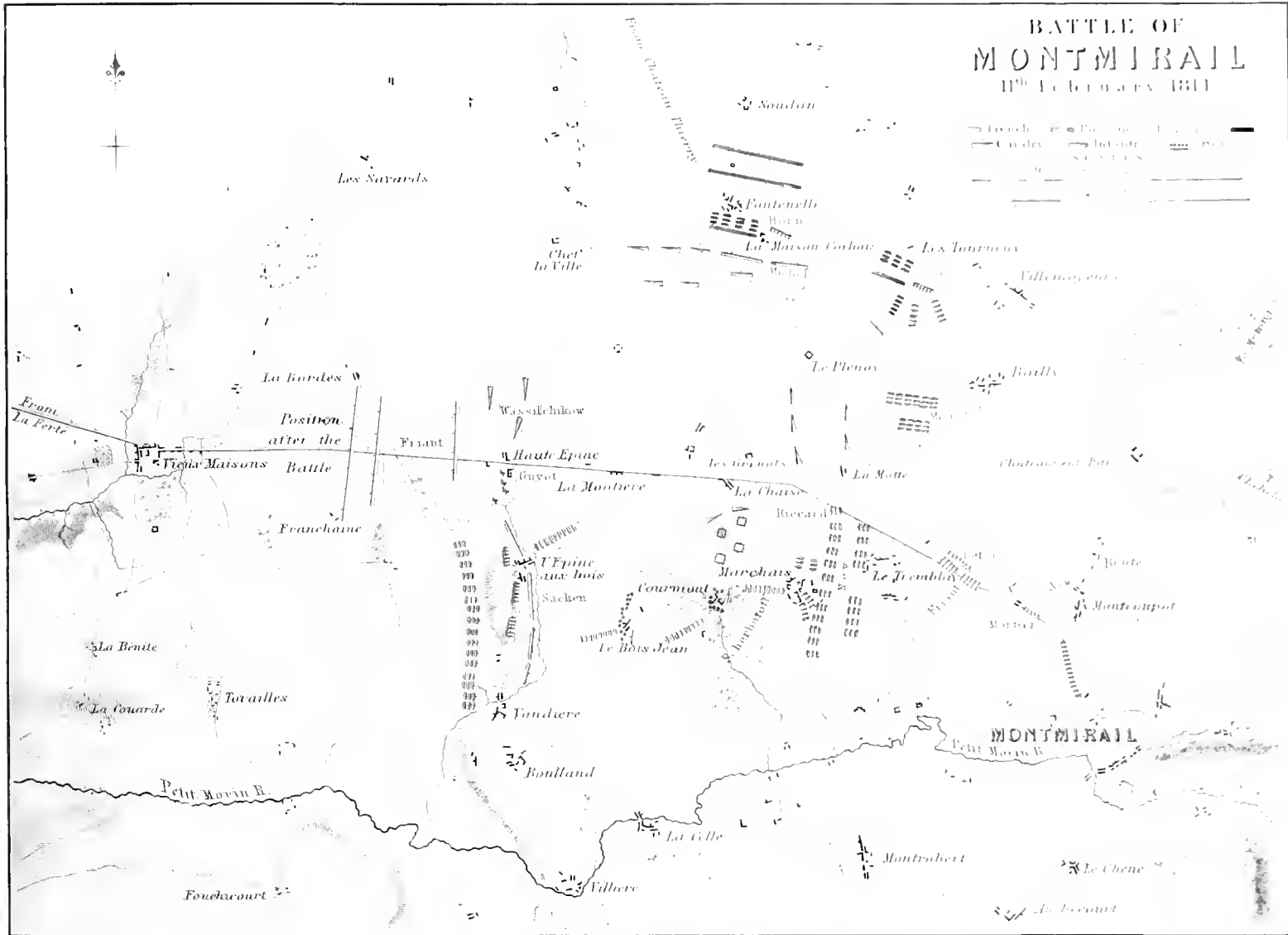








## BATTLE OF MONTMIRAIL

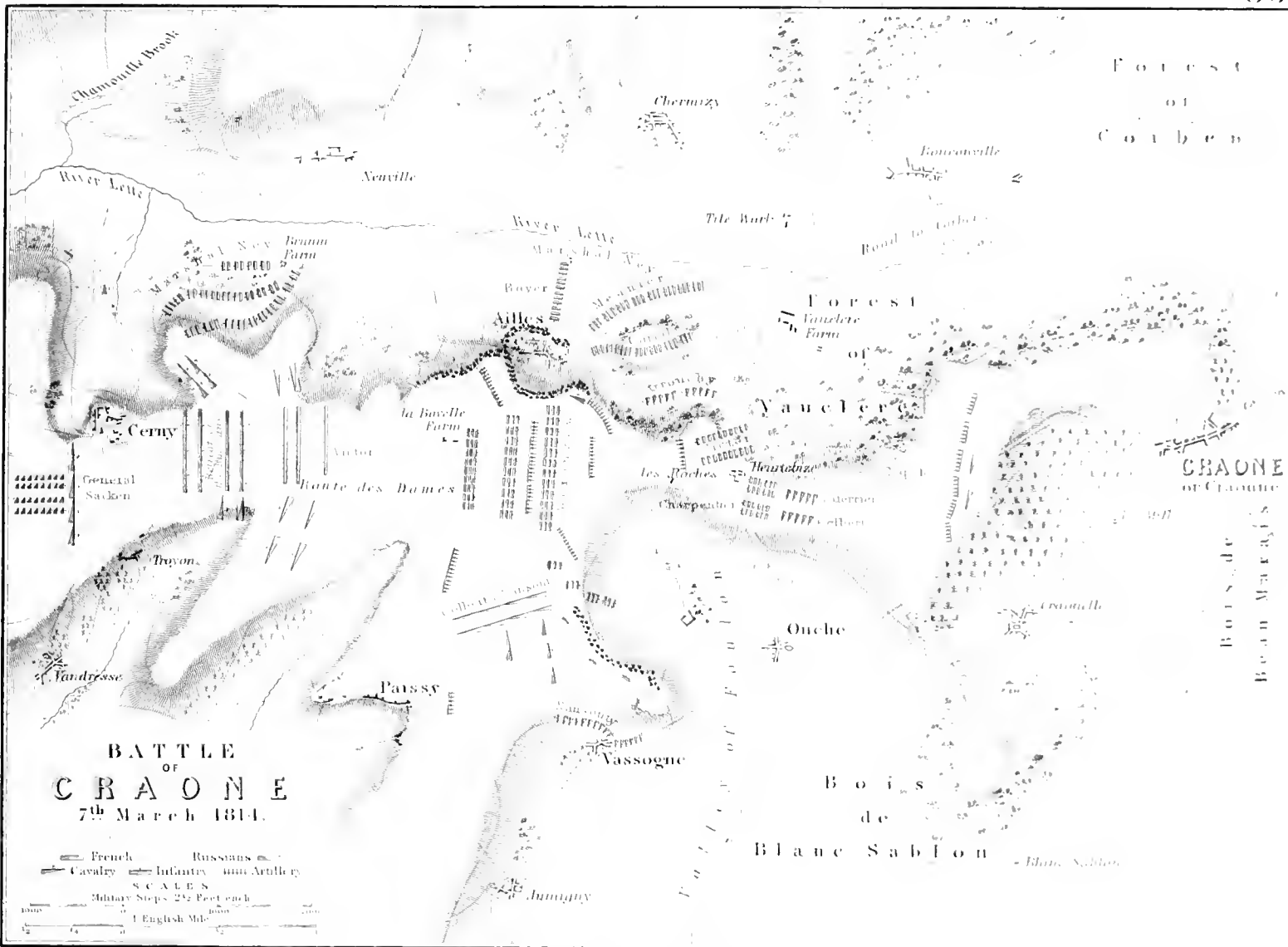
11<sup>th</sup> February 1951



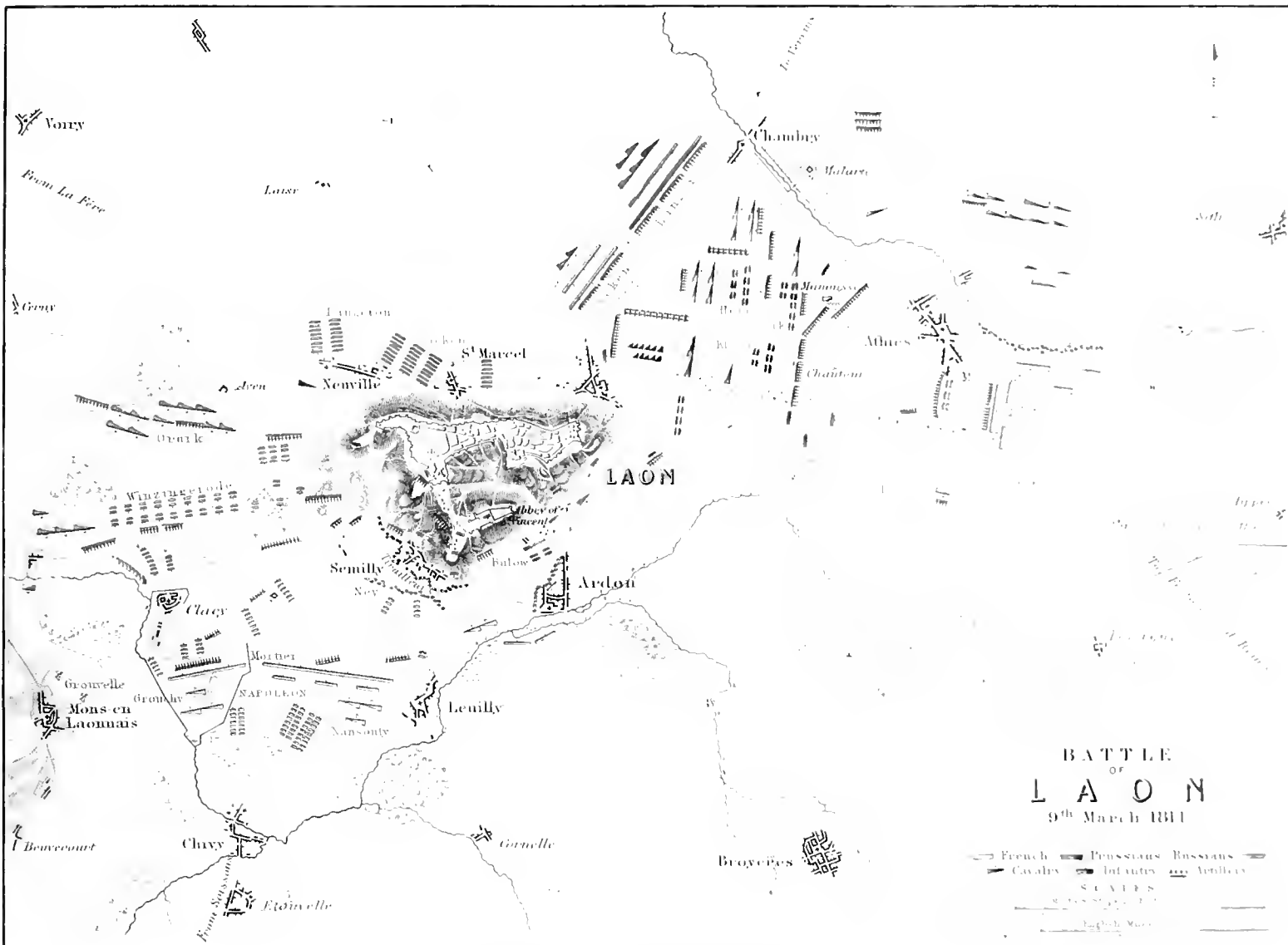




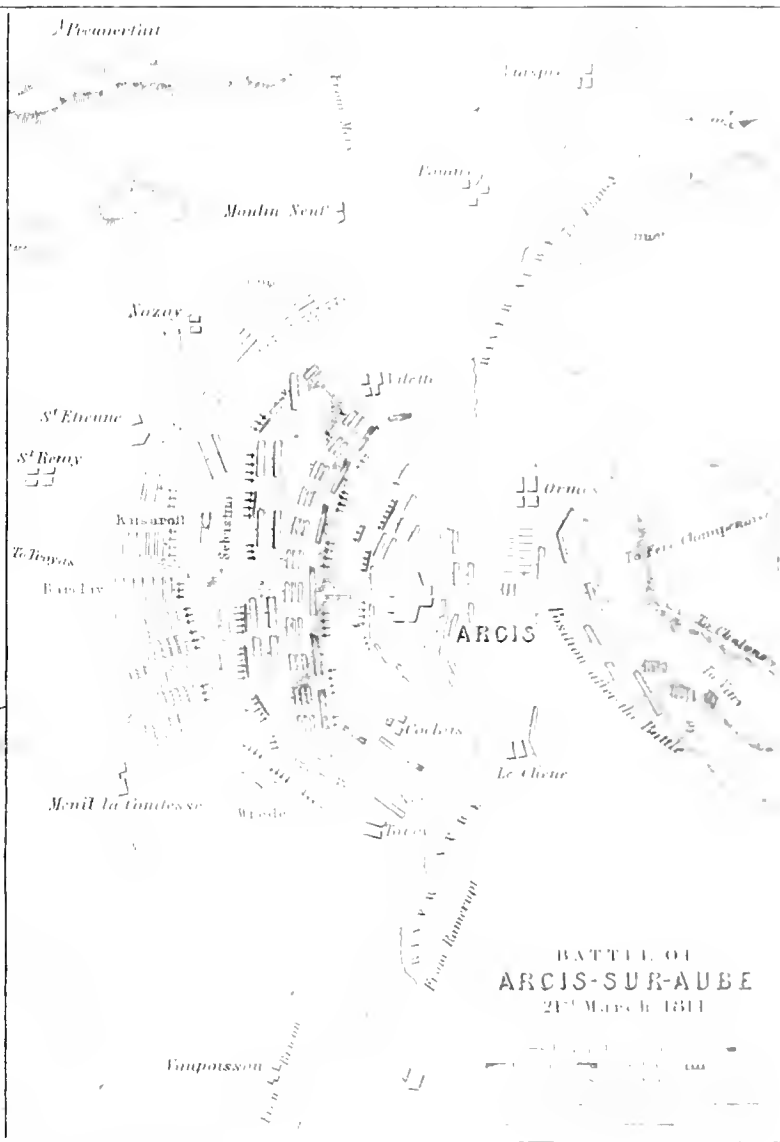
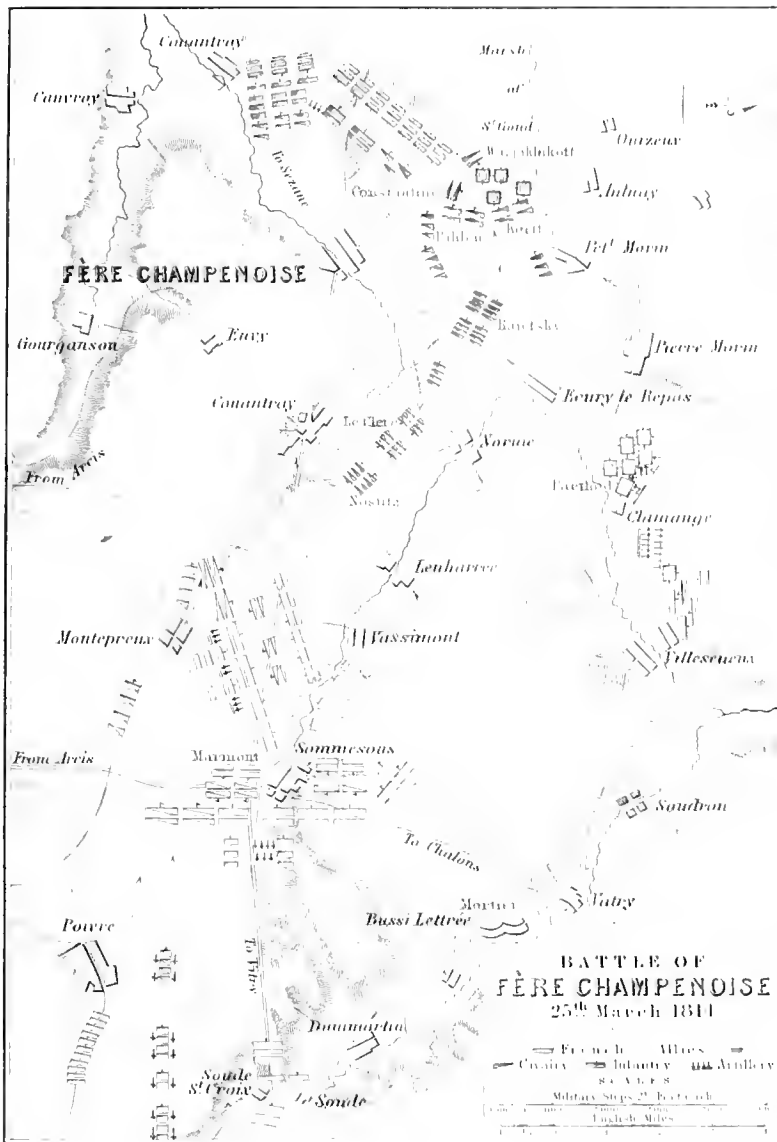






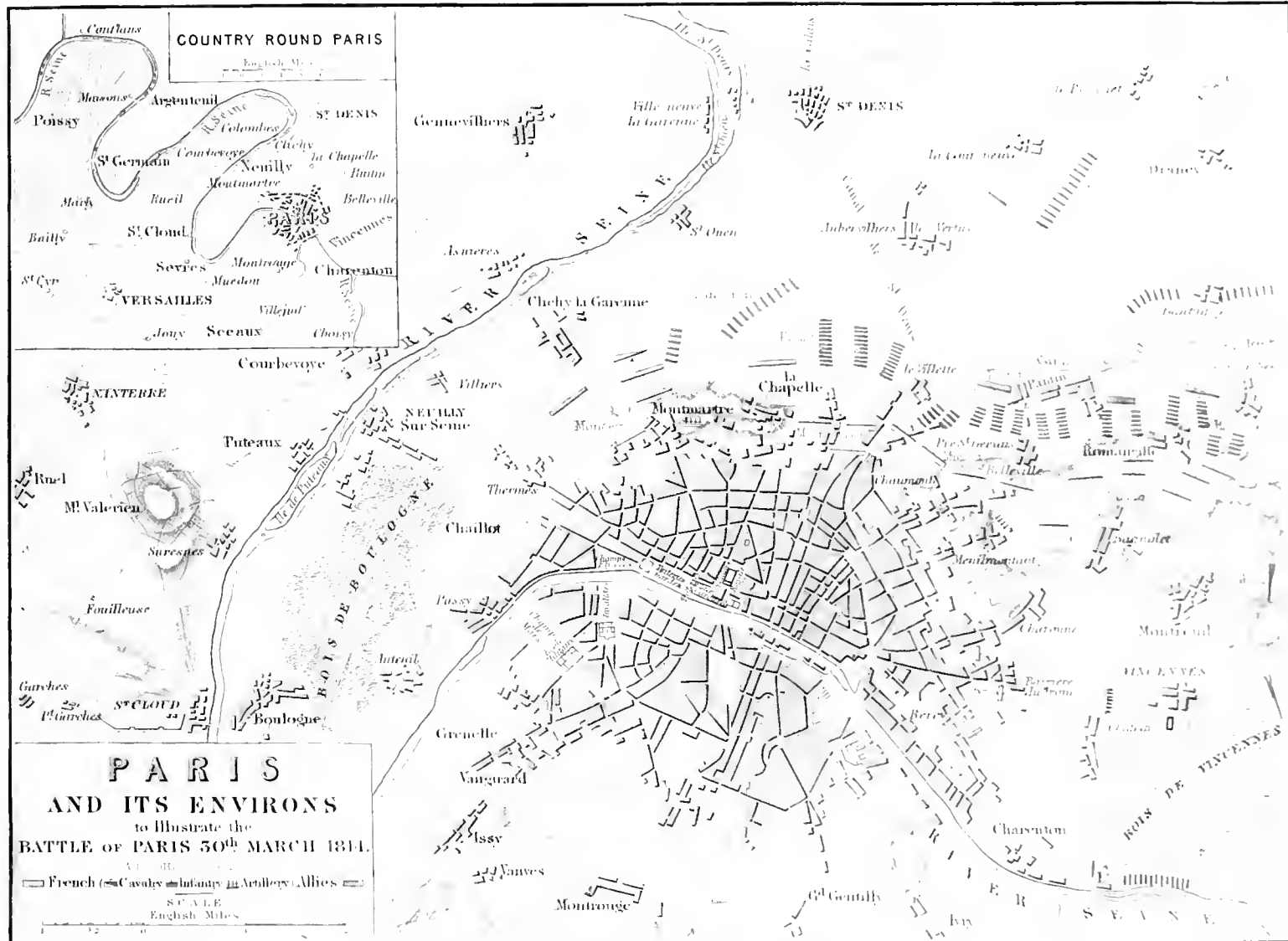




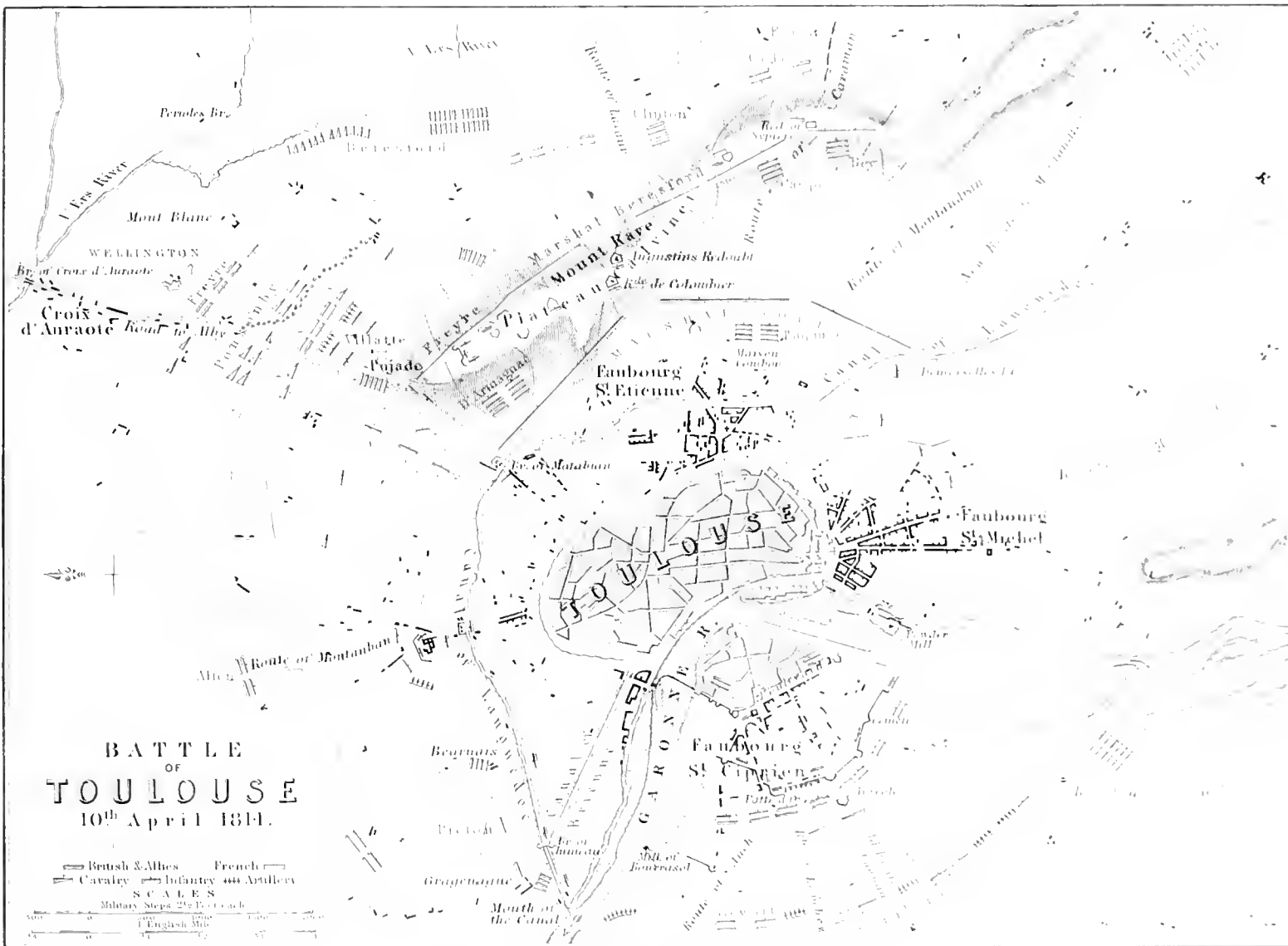








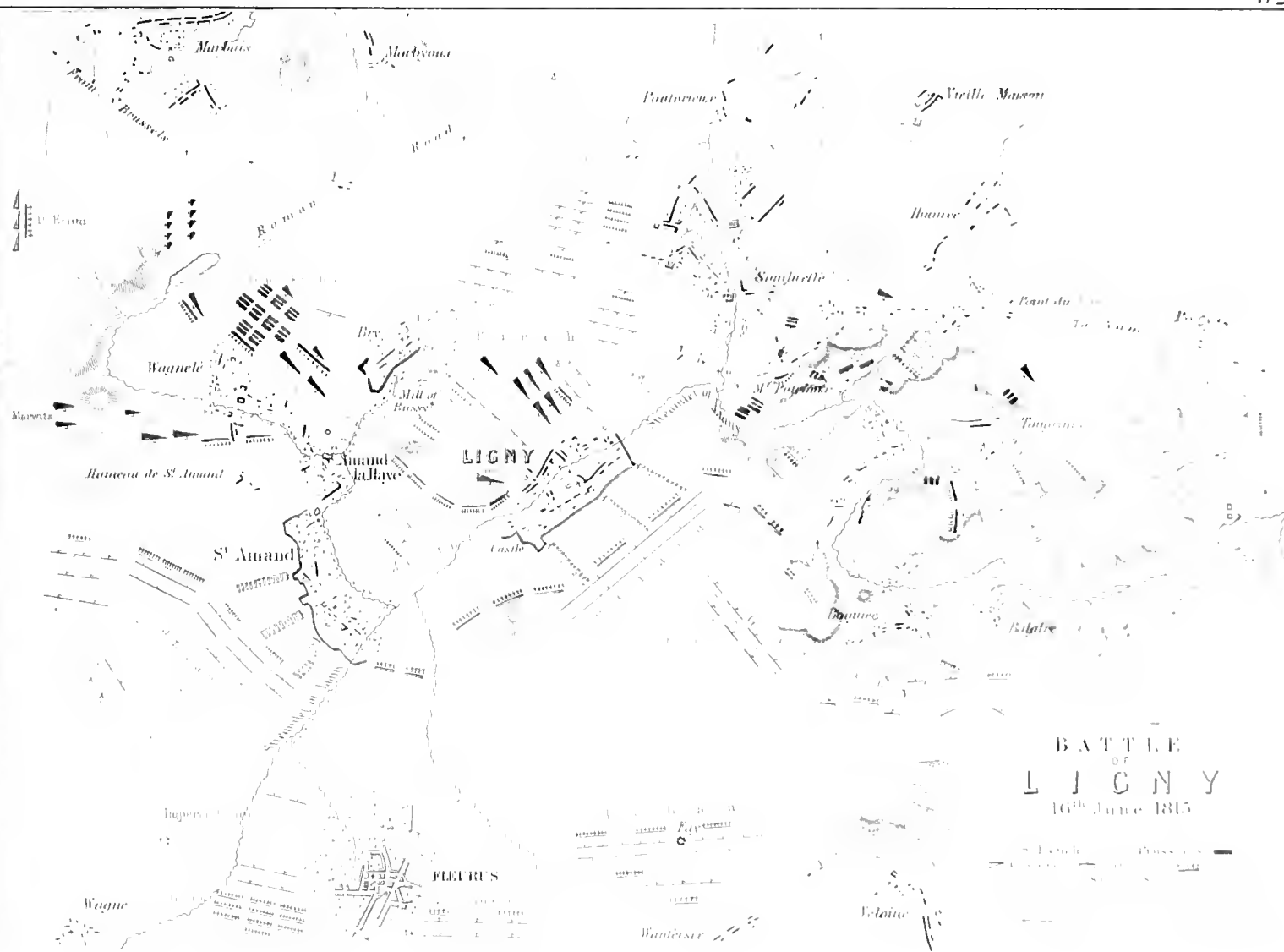














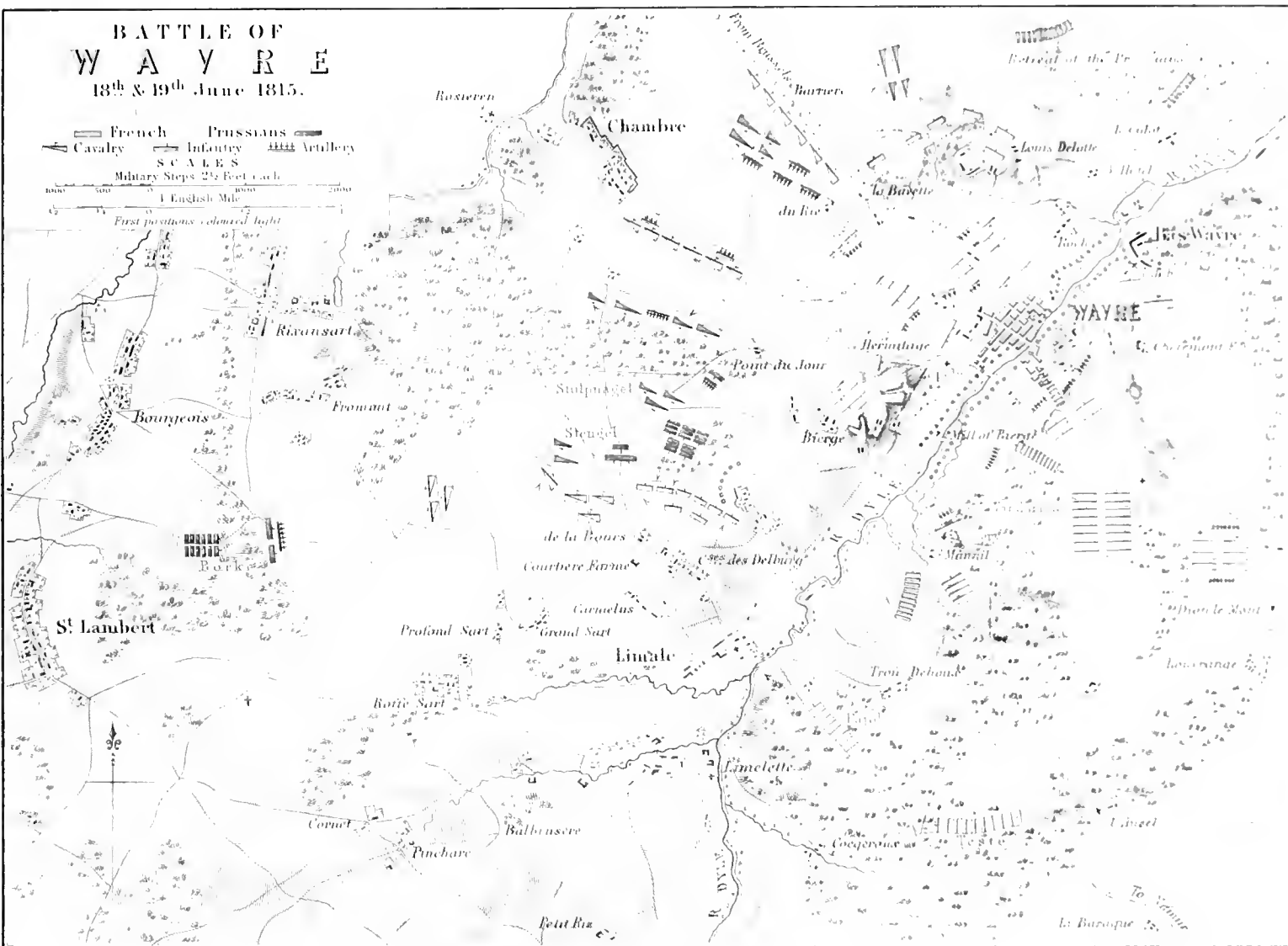


# BATTLE OF W A Y R E

18th & 19th June 1815.

French      Prussians  
Cavalry      Infantry      Artillery  
S C A L E S  
Military Steps 2½ Feet each  
1 English Mile

First positions coloured light









# BATTLE OF WATERLOO

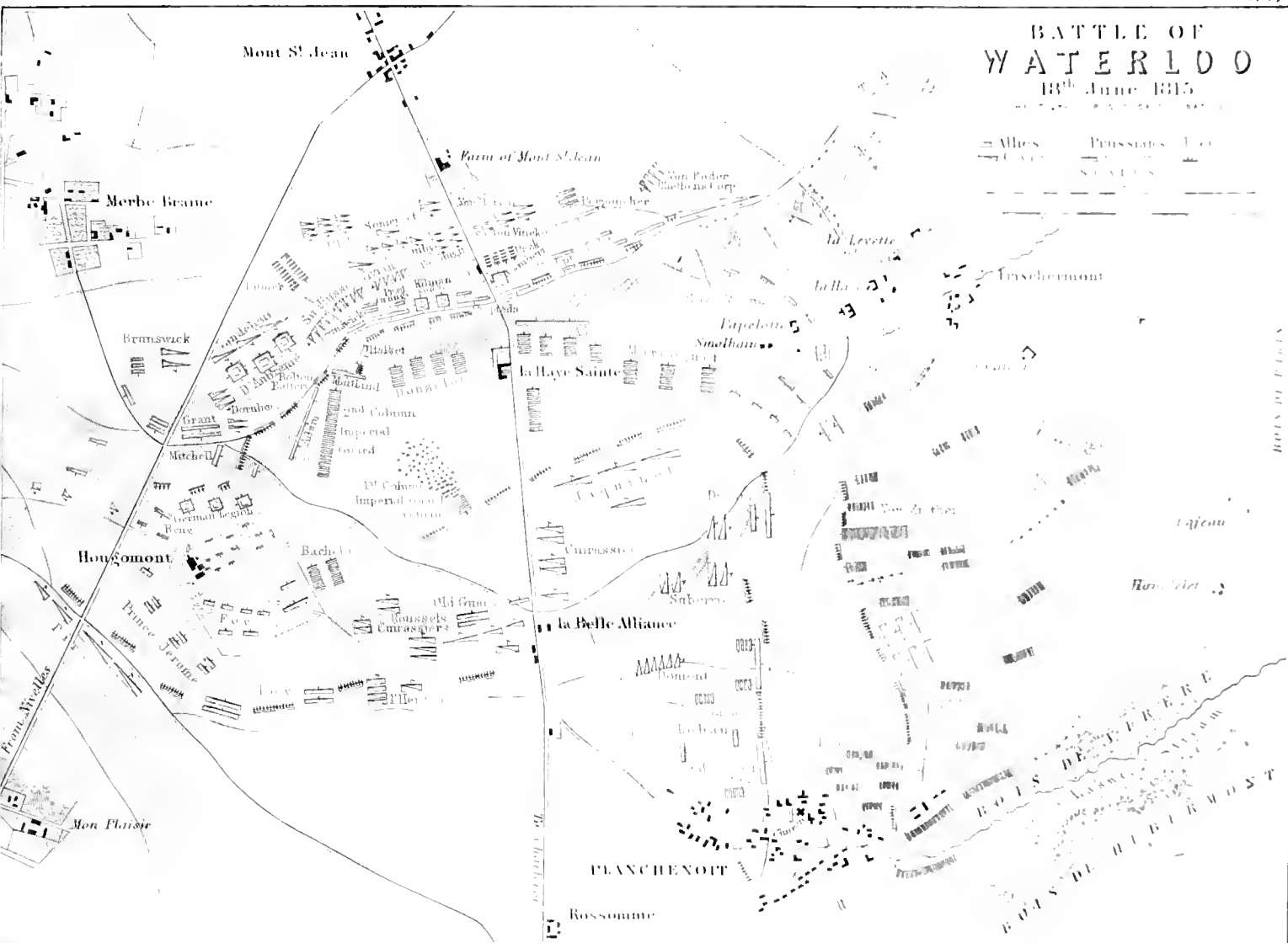
18<sup>th</sup> June 1815.

1000 1000 1000 1000 1000 1000 1000 1000 1000 1000

= Alles      Prussians    100

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